

SC-DX100
SC-DX103
SC-DX105

DVD Camcorder user manual

imagine the possibilities

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www.samsung.com/global/register

SAMSUNG

key features of your DVD camcorder

3 1/2 inch DVD disc camcorder

DVD-VIDEO recording with 3 1/2 inch (8cm) DVD-RW/+RW/-R/+R DL (Dual Layer) discs.

2.7" wide (16:9) LCD screen (112K pixels)

The 2.7" wide (16:9) LCD screen provides excellent viewing clarity with improved resolution. The 112K pixels LCD screen rotates up to 270 degrees for multiple viewing angles providing sharp, detailed images for monitoring or playback, and the widescreen format makes shooting in 16:9 mode and composing shots even easier.

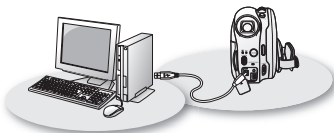
Capture visions farther than the eye can see (34X optical/1200X digital zoom)

Samsung's powerful optical zoom lenses bring the world closer without sacrificing image quality. In addition, digital zoom interpolation means that extreme digital zooming is clearer, with less distortion than previous types of digital zooms.



Viewing images on your PC and using PC CAM

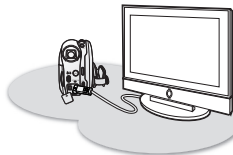
With DV Media PRO, you can view the recorded images on a PC and use PC cam function by connecting the DVD camcorder to a PC. ➡ pages 90~97



Voice Plus





You can add your voice to the movie image by connecting the DVD camcorder to a TV.

➡ page 89



safety warnings





What the icons and signs in this user manual mean:

 WARNING	Means that death or serious personal injury is a risk.
 CAUTION	Means that there is a potential risk for personal injury or material damage.
 CAUTION	To reduce the risk of fire, explosion, electric shock, or personal injury when using your DVD camcorder, follow these basic safety precautions:
	Means hints or referential pages that may be helpful when operating the DVD camcorder.

These warning signs are here to prevent injury to you and others.

Please follow them explicitly. After reading this section, keep it in a safe place for future reference.

important safety instructions

 CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN 	 This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.	 This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

Warning

To Reduce The Risk Of Fire Or Electric Shock, Do Not Expose This Apparatus To Rain Or Moisture.”

Caution

Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

To disconnect the apparatus from the mains, the plug must be pulled out from the mains socket, therefore the mains plug shall be readily operable.

important safety instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachment/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
16. **VENTILATION:**
Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the CAMCORDER and to protect it from overheating. These openings must not be blocked or covered. Never place your CAMCORDER on a bed, sofa, rug, or other similar surface: on or near a radiator or heat register. This CAMCORDER should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.



17. POWER SOURCES:

The CAMCORDER should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supply at your home, consult your appliance dealer or local power company. A CAMCORDER is intended to be operated from battery power, or other sources, refer to the operating instructions.

18. GROUNDING OR POLARIZATION:

This CAMCORDER may be equipped with either a polarized 2-wire AC line plug (a plug having one blade wider than the other) or a 3-wire grounding type plug, a plug having a third (grounding) pin. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your outlet. Do not defeat the safety purpose of the polarized plug.

19. POWER-CORD PROTECTION:

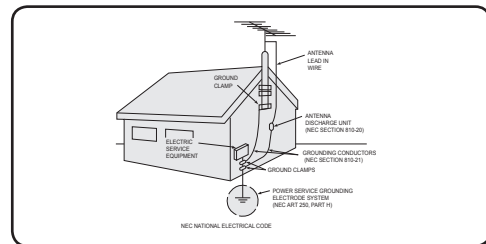
Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords or plugs, convenient receptacles, and the point where they exit from the unit.

20. OUTDOOR ANTENNA GROUNDING:

CAMCORDER, be sure the antenna or cable system is grounded to provide some protection against voltage surges and built-up static charges, Section 810 of the National Electrical Code, ANSI/NFPA No.

70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire and supporting structure, grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding to conductors, location of antenna-discharge unit, connection to grounding electrodes and requirements for the grounding electrode.

See figure below.



21. LIGHTNING:

For added protection of this CAMCORDER during a lightning storm or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the CAMCORDER due to lightning and powerline surges.

important safety instructions

22. POWER LINES:

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

23. OVERLOADING:

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

24. OBJECTS AND LIQUIDS:

Never push objects of any kind into this CAMCORDER through openings as they may touch dangerous voltage points or short out a part that could result in a fire or electric shock. Never spill liquids of any kind onto the CAMCORDER. Should spillage occur, unplug unit and have it checked by a technician before use.

25. SERVICING:

Do not attempt to service this CAMCORDER yourself. Opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

26. DAMAGE REQUIRING SERVICE:

Unplug this CAMCORDER from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- a. When the power-supply cord or plug is damaged.
- b. If any liquid has been spilled onto, or objects have fallen into the CAMCORDER.
- c. If the CAMCORDER has been exposed to rain or water.
- d. If the CAMCORDER does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the CAMCORDER to its normal operation.
- e. If the CAMCORDER has been dropped or the cabinet has been damaged.
- f. When the CAMCORDER exhibits a distinct change in performance, this indicates a need for service.

27. REPLACEMENT PARTS:

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer and having the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

28. SAFETY CHECK:

Upon completion of any service or repairs to this CAMCORDER, ask the service technician to perform safety checks to determine that the CAMCORDER is in safe operating order.

29. To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or moisture.
30. If this power supply is used at 240V ac, a suitable plug adaptor should be used.
31. This product is covered by one or more of the following U.S. patents:
5,060,220 5,457,669 5,561,649 5,705,762 6,043,912
6,438,099 6,467,061 6,556,521 6,578,163 6,697,307
6,728,474 6,771,891 6,894,963 6,895,593 6,937,815
6,996,327 7,009,926 7,085,221 7,088,649 7,092,327
7,099,566 7,123,564 7,142,493 7,142,495 7,145,861
7,146,624 7,151,729 7,161,879 7,164,647 7,167,437
7,173,891 7,177,250 7,194,187 7,203,891 7,209,423
7,210,067 7,228,062 7,245,566 7,245,567 7,257,065
7,263,045 7,269,110 7,272,086 7,272,106 7,280,460
7,283,729 7,286,454 7,304,938

USER INSTALLER CAUTION:

Your authority to operate this FCC certified equipment could be voided if you make changes or modifications not expressly approved by this party responsible for compliance to part 15 FCC rules.

NOTE:

- (Hg) LAMP(S) INSIDE THIS PRODUCT CONTAIN MERCURY AND MUST BE RECYCLED OR DISPOSED OF ACCORDING TO LOCAL, STATE OR FEDERAL LAWS. For details see lamprecycle.org, eiaa.org, or call 1-800-Samsung (7267864)

CALIFORNIA USA ONLY

This Perchlorate warning applies only to primary CR (Manganese Dioxide) Lithium coin cells in the product sold or distributed ONLY in California USA

“Perchlorate Material - special handling may apply,
See www.dtsc.ca.gov/hazardouswaste/perchlorate.”

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help and for additional suggestions.

The user may find the following booklet prepared by the Federal Communications Commission helpful: “How to Identify and Resolve Radio-TV Interference Problems.”

This Booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

FCC Warning

The user is cautioned that changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

This device complies with Part 15 of FCC Rules.

Operation is subject to the following two conditions;

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

precautions

Warning!

- This camcorder should always be connected to an AC outlet with a protective grounding connection.
- Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.

Caution

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

If this power supply is used at 240V ac, a suitable plug adaptor should be used.

**CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT
LUOKAN 1 LASER LAITE
KLASS 1 LASER APPARAT
PRODUCTO LASER CLASE 1**

important information on use

BEFORE USING THIS CAMCORDER

- **This DVD camcorder records video in MPEG2 format in the DVD camcorder mode, MPEG4 format in the digital camera mode and at Standard Resolution (SD-VIDEO).**
- **Please note that this DVD camcorder is not compatible with other digital video.**
- **Before recording important video, make a trial recording.**
Play back your trial recording to make sure the video and audio have been recorded properly.
- **The recorded contents cannot be compensated for:**
 - Samsung cannot compensate for any damage caused when a recording cannot be played back because of a defect in the DVD camcorder or memory card. Samsung cannot be responsible for your recorded video and audio.
 - Recorded contents may be lost due to a mistake when handling this DVD camcorder or memory card, etc. Samsung shall not be responsible for compensation for damages due to the loss of recorded contents.

- Make a backup of important recorded data.
Protect your important recorded data by copying the files to PC. We also recommend you copy it from your PC to other recording media for storage. Refer to the software installation and USB connection guide.
- Copyright: Please note that this DVD camcorder is intended for personal use only.
Data recorded on the card in this DVD camcorder using other digital/analog media or devices is protected by the copyright act and cannot be used without permission of the owner of copyright, except for personal enjoyment. Even if you record an event such as a show, performance or exhibition for personal enjoyment, it is strongly recommended that you obtain permission beforehand.

ABOUT THIS USER MANUAL

- **This user manual covers models SC-DX100/DX103/DX105.** SC-DX103/DX105 have two storage media, Disc and Card. Although the external appearance is different, they operate in the same way.
- Illustrations of model SC-DX105 are used in this user manual.
- The displays in this user manual may not be exactly the same as those you see on the LCD screen.
- Designs and specifications of the camcorder and other accessories are subject to change without any notice.

(□, Ⓢ) MARKS NEXT TO MENU HEADINGS

- **Some functions of this DVD camcorder are unavailable with memory card or disc.**
Refer to the marks to the right of each function to identify whether the memory card or disc is compatible with the function. Refer to these marks and identify the functions and operation to match the memory card or disc you use.

NOTES REGARDING TRADEMARKS

- All the trade names and registered trademarks mentioned in this manual or other documentation provided with your Samsung product are trademarks or registered trademarks of their respective holders.
- Windows® is registered trademark or trademark of Microsoft Corporation, registered in the United States and other countries.
- Macintosh is the trademark of Apple Computer, Inc.
- All the other product names mentioned herein may be the trademark or registered trademarks of their respective companies.
- Furthermore, "TM" and "R" are not mentioned in each case in this manual.



- Manufactured under license from Dolby Laboratories.
- "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.

precautions when using

IMPORTANT NOTE

- **Handle the liquid crystal display (LCD) with care:**
 - The LCD is a very delicate display device: Do not press its surface with force, hit it or prick it with a sharp object.
 - If you push the LCD surface, unevenness in display may occur. If unevenness does not disappear, turn the camcorder off, wait for a few moments, then turn it on again.
 - Do not place the camcorder with the open LCD screen down.
 - Close the LCD monitor when not using the camcorder.
- **Liquid crystal display :**
 - The LCD screen will be slightly dimmer than usual when the camcorder is at low temperature, as in cold areas, or immediately after power is turned on. Normal brightness will be restored when the temperature inside the camcorder rises. This has no effect on the images in the storage media, so there is no cause for concern.
- **Hold the DVD camcorder correctly:**
 - Do not hold the DVD camcorder by the LCD monitor when lifting it: the viewfinder or LCD monitor could detach and the DVD camcorder may fall.
- **Do not subject the DVD camcorder to impact:**
 - This DVD camcorder is a precision machine. Take great care that you do not strike it against a hard object or let it fall.
 - Do not use the DVD camcorder on a tripod in a place where it is subject to severe vibrations or impact.
- **No sand or dust!**

Fine sand or dust entering the DVD camcorder or AC power adaptor could cause malfunctions or defects.
- **No water or oil!**

Water or oil entering the DVD camcorder or AC power adaptor could cause electric shock, malfunctions or defects.
- **Heat on surface of product:**

The surface of the DVD camcorder will be slightly warm when in use, but this does not indicate a fault.
- **Be careful of ambient temperature:**
 - Using the DVD camcorder in a place where the temperature is over 60°C (140°F) or under 0°C (32°F) will result in abnormal recording/playback.
 - Do not leave the DVD camcorder on a beach or in a closed vehicle where the temperature is very high for a long time: This could cause a malfunction.
- **Do not point directly at the sun:**
 - If direct sunlight strikes the lens, the DVD camcorder could malfunction or a fire could occur.
 - Do not leave the DVD camcorder with the LCD screen exposed to direct sunlight: This could cause a malfunction.
- **Do not use the DVD camcorder near TV or radio:**
 - This could cause noise to appear on the TV screen or in radio broadcasts.

- **Do not use the DVD camcorder near strong radio waves or magnetism:**
 - If the DVD camcorder is used near strong radio waves or magnetism, such as near a radio transmitter or electric appliances, noise could enter video and audio that are being recorded. During playback of normally recorded video and audio, noise may also be present in picture and sound. At worst, the DVD camcorder could malfunction.
- **Do not expose the DVD camcorder to soot or steam:**
 - Thick soot or steam could damage the DVD camcorder case or cause a malfunction.
- **Do not use the DVD camcorder near corrosive gas:**
 - If the DVD camcorder is used in a place where there is dense exhaust gas generated by gasoline or diesel engines, or corrosive gas such as hydrogen sulphide, the external or internal terminals could corrode, disabling normal operation, or the battery connecting terminals could corrode, so that power will not turn on.
- **Do not expose the DVD camcorder to insecticide:**

Insecticide entering the DVD camcorder could dirty the lens in the laser pickup block, and in such a case the DVD camcorder might not operate normally. Turn the DVD camcorder off and cover it with vinyl sheet, etc. before using insecticide.
- **Do not use a 3 1/2 inch(8cm) CD lens cleaner:**
 - Cleaning the lens is not necessary when using this DVD camcorder in the usual way.
 - Using a 3 1/2 inch(8cm) CD lens cleaner could cause this DVD camcorder to malfunction.
- **Do not touch the lens in the laser pickup block.**

If you touch the lens in the laser pickup block directly it may cause a malfunction. The laser pickup block is not warranted for damage caused by misuse. Therefore, pay much attention when operating this camcorder.
- **Do not wipe the DVD camcorder body with benzene or a thinner:**
 - The coating of exterior could peel off or the case surface could deteriorate.
- **Keep the memory card out of reach of children to prevent swallowing.**

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introduction to basic features

This chapter introduces the basic features of your DVD camcorder.

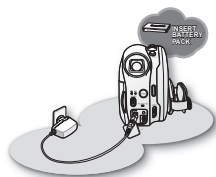
See the reference pages below for more information.

Step 1 : Preparation

- Charging the battery pack ↪ page 18
- Setting OSD language and the date/time ↪ pages 28-29
- Selecting the storage media (DISC and CARD) (SC-DX103/DX105 only)
↪ page 30

You can record movie and photo images.

- You can take a photo only on the memory card. DVD discs do not support photo mode.
- Refer to pages 52~54 for the supported memory cards before purchasing them.



When recording movie images on a DVD disc

Select the proper disc for use.

Do you want to delete or edit movie images on the DVD camcorder?

YES

NO

Do you want to reuse the disc after formatting ?

YES

NO

When recording for a long time

DVD -RW

VR

DVD -RW

VIDEO

DVD +RW

DVD +R DL

DVD -R

- DVD+RW, DVD+R DL and DVD-R do not have Video or VR mode selection.
- You can delete the movie image only on a DVD-RW disc (VR mode).
- Selecting the desired disc and disc formatting. ↪ pages 30-31

Step 2 : Recording

- Recording movie images ↪ pages 33~37, 56
- Taking the photo images (SC-DX103/ DX105 only) ↪ page 57



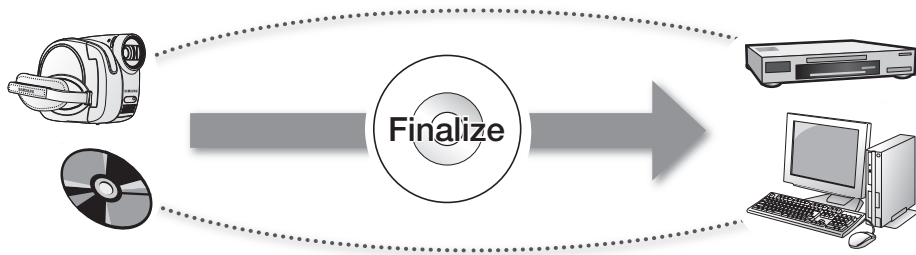
Step 3: Playing back / Editing

- Selecting an image to play back from the thumbnail index views
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- Editing movie images as your preference (Editing function is available only in DVD-RW(VR mode)) ↪ pages 40~46



Step 4: Viewing on DVD devices

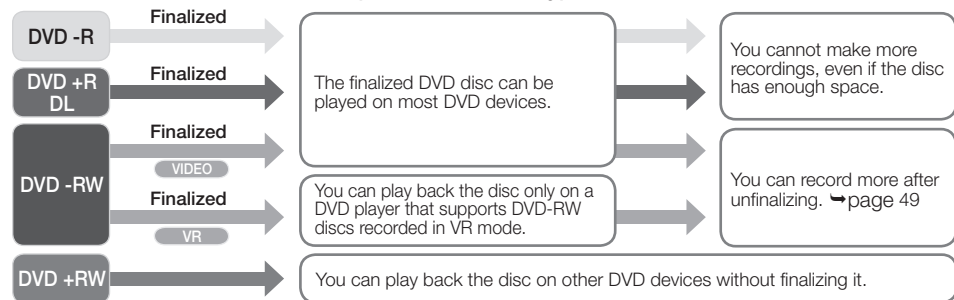
You must finalize the disc in advance to view the movie images recorded on a DVD camcorder on other DVD devices. (Finalize is a function that enables a disc recorded on the DVD camcorder to be playable on DVD devices such as DVD players.)



↪ continued

introduction to basic features

The function of the finalized disc depends on the disc type.



- You cannot use the following discs.
 - 5 inch (12cm) CD/DVD discs
 - CD/CD-R/CD-RW/DVD-ROM/DVD+R (Single Layer)/DVD-RAM/DVD-R (Dual Layer), Floppy Disk, MO, MD, iD, LD
- We are not responsible for data loss on a disc.
- We do not warrant any damage or loss incurred due to recording and playback failure caused by disc or card malfunction.
- We take no responsibility and offer no compensation for any recording failure, loss of recorded or edited material and/or damage to the recorder arising from the misuse of discs.
- For stable and perpetual recording and playback, use **TDK, MKM, Verbatim** discs that have the "VIDEO CAMERA" designation. If you do not use them, recording and playback operation may not work properly or you may not be able to eject the disc from the camcorder.
- The time it takes to finalize a disc may vary depending on the recording time.
- You cannot overwrite, edit, or format a finalized disc. If needed, unfinalize the disc. (DVD-RW only) ➡ page 49
- It is not guaranteed that all DVD players/recorders/drives can play discs finalized in this DVD camcorder.
- For compatibility details, refer to the DVD players/recorders/drives owner's manual.
- For more information about available discs, see page 101.

getting to know your DVD camcorder

WHAT'S INCLUDED WITH YOUR DVD CAMCORDER

Your new DVD camcorder comes with the following accessories. If any of these items is missing from your box, call Samsung's Customer Care Center.

✧ The exact appearance of each item may vary by model.



Battery pack
(IA-BP80W)
(AD43-00186A)



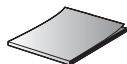
AC power adaptor
(AA-E9 type)
(AD44-00116B)



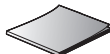
AV cable
(AD39-00001A)



USB cable
(AK39-00095A)
(SC-DX103/ DX105 only)



User manual
(AD68-02550A)



Quick start guide
(AD68-02561A)



Button-type battery(AD43-10130H)
for internal clock(TYPE: CR2025)
or remote control(SC-DX105 only)



Remote control
(AD59-00155A)
(SC-DX105 only)



Software CD
(AD46-00097A)
(SC-DX103/DX105 only)



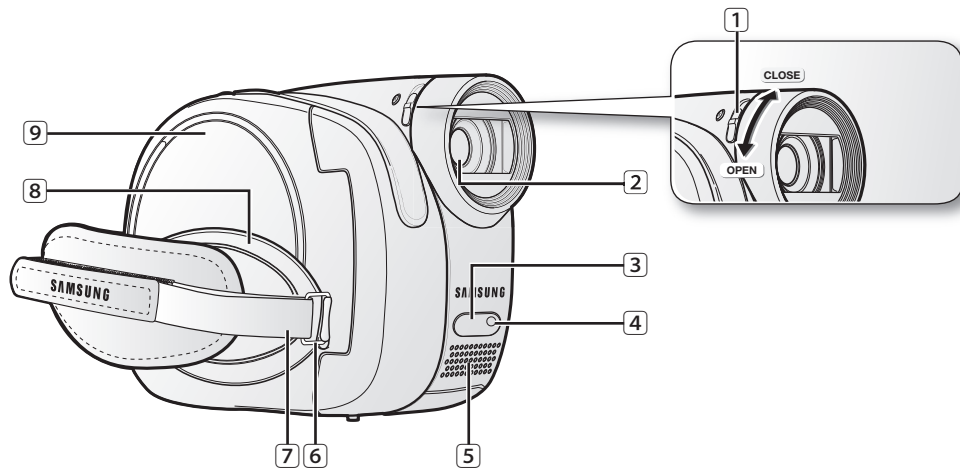
**3 1/2 inch(8cm)
DVD-RW disc(Optional)**
(AD46-00090A)



- The contents may vary depending on the sales region.
- Parts and accessories are available at your local Samsung dealer.
- A memory card is not included. See pages 52~53 for memory cards compatible with your DVD camcorder. (SC-DX103/DX105 only)
- To buy this optional accessory, contact your nearest Samsung dealer.

getting to know your DVD camcorder

FRONT AND RIGHT VIEW



1 Lens open/close switch

2 Lens

3 Remote sensor (SC-DX105 only)

4 Light (SC-DX105 only)

5 Internal microphone

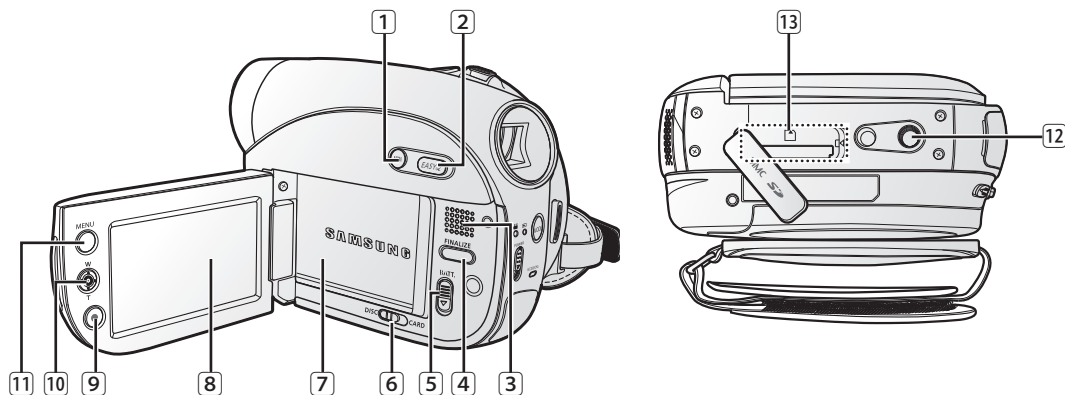
6 Grip belt hook

7 Grip belt

8 Swivel handle

9 Disc cover

LEFT AND BOTTOM VIEW



1 Display ([□]I) button

2 EASY Q button

3 Built-in speaker

4 FINALIZE button

5 BATT. (battery release) switch

6 Storage mode switch (DISC/CARD)
(SC-DX103/ DX105 only)

7 Battery pack

8 LCD screen

9 Recording start/stop button

10 Joystick (up/down/right/left/Select, W/T)

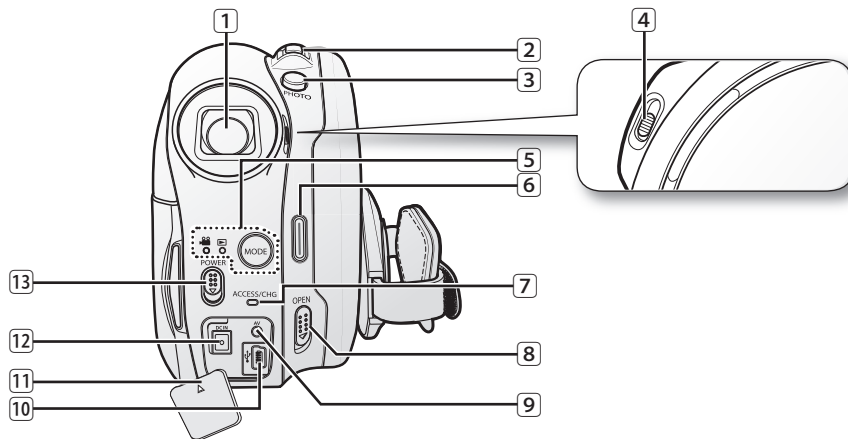
11 MENU button

12 Tripod receptacle

13 Memory card slot (SC-DX103/ DX105 only)

getting to know your DVD camcorder

REAR AND TOP VIEW



1 Viewfinder

2 Zoom (W/T) lever/ Volume control

3 PHOTO button (SC-DX103/ DX105 only)

4 Focus adjustment knob

5 MODE button / Mode indicator
(Record (⏏)/Play (▶) mode)

6 Recording start/stop button

7 ACCESS/CHG indicator

8 OPEN switch

9 AV jack

10 USB jack (SC-DX103/ DX105 only)

11 DC IN/ USB (SC-DX103/ DX105 only) /
AV jack cover

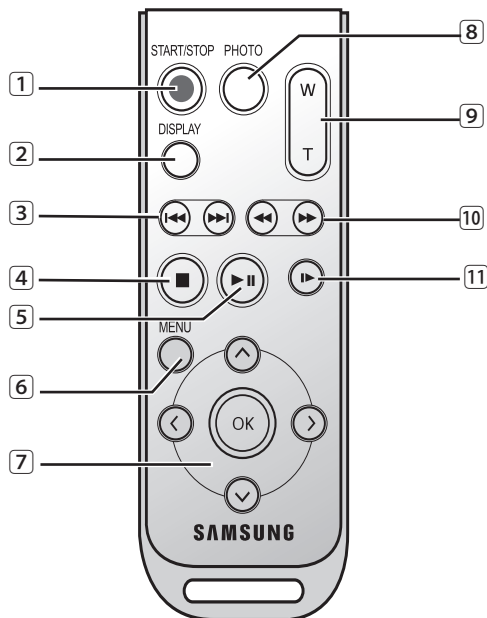
12 DC IN jack

13 POWER switch

preparation

This section provides information on using this DVD camcorder; such as how to use the provided accessories, how to charge the battery, how to setup the operation mode and initial setup.

REMOTE CONTROL (SC-DX105 only)



- 1 START/STOP button
- 2 DISPLAY button
- 3 Skip (⏮/⏭) button
- 4 Stop (■) button
- 5 Play/Pause (⏮/⏭) button
- 6 MENU button
- 7 Control (⏮/⏭/⏮/⏭/⏮/⏭) buttons
- 8 PHOTO button
- 9 Zoom (W/T) button
- 10 Search (⏮/⏭) button
- 11 Slow playback (⏮) button



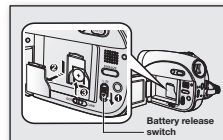
The buttons on the remote control function the same as those on DVD camcorder.

preparation

INSTALLING THE BUTTON-TYPE BATTERY

Installation for the internal clock (battery release) switch

1. Open the LCD screen, then slide the **BATT.** (battery release) switch in the arrow direction to remove the battery pack.
2. Remove the battery cover.
3. Insert the button-type battery then place the battery cover back.
 - Position the button type battery with the positive (+) terminal face out in the button type battery slot.



Battery installation for the internal clock

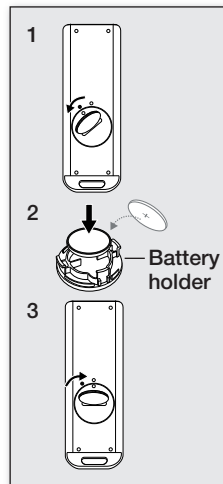
The button type battery maintains the clock function and preset contents of the memory : even if the battery pack or AC power adapter is removed.

The button type battery for the DVD camcorder lasts about 6 months under normal operation from the time of installation.

When the button type battery becomes weak or dead, the date/time indicator will display “JAN/01/2008 12:00 AM” when you turn the date and time display on.

Installing the button-type battery in the remote control (SC-DX105 only)

1. Turn the battery holder counterclockwise (as indicated with (⊙) mark) using your fingernail or a coin to open it. The battery holder opens.
2. Insert the battery into the battery holder with the positive (+) terminal facing down and press it firmly until you hear a locking sound.
3. Place the battery holder back in the remote control, matching its (○) mark with the (⊙) mark on the remote control, and turn the battery holder clockwise to lock it.



Precautions regarding the button type battery

- There is a danger of explosion if button type battery is incorrectly replaced. Replace only with the same or equivalent type.
- Do not pick up the battery using tweezers or other metal tools. This will cause a short circuit.
- Do not recharge, disassemble, heat or immerse the battery in water to avoid the risk of explosion.



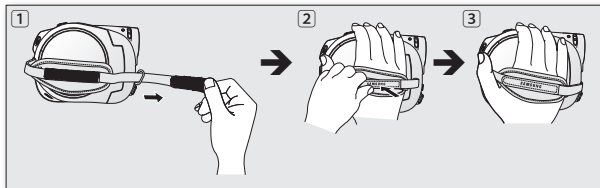
Keep the button type battery out of the reach of the children. Should any battery be swallowed, seek medical attention immediately.

HOLDING THE DVD CAMCORDER

Attaching the grip belt

Insert your right hand from the bottom of the DVD camcorder up to the base of your thumb. Put your hand in a position where you can easily operate the **Recording start/stop** button, **PHOTO** button, and the **Zoom** lever.

Adjust the length of grip belt so that the DVD camcorder is stable when you press the **Recording start/stop** button with your thumb.



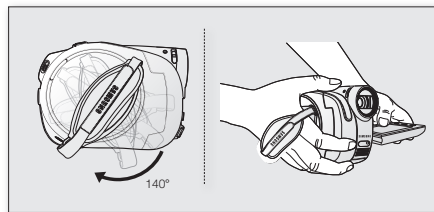
1. Pull and detach the grip belt.
Insert the grip belt into its hook as shown in the figure.
2. Insert your hand into the grip belt and adjust its length.
3. Close the grip belt.

Angle Adjustment

Rotate the swivel handle to the most convenient angle. You can rotate it downwards upto 140°.



Please be careful not to turn the swivel handle backward as it may cause damage.



preparation

CHARGING THE BATTERY PACK

- There are two types of power source that can be connected to your DVD camcorder.
- Do not use provided power supply units with other equipment.
 - The battery pack: used for outdoor recording.
 - The AC power adaptor: used for indoor recording.

To charge the battery pack

Be sure to charge the battery pack before you start using your DVD camcorder.

Attaching the battery pack to the DVD camcorder

1. Open up the LCD screen 90 degrees with your finger.
2. Fit the battery pack to the battery attachment platform and push the battery pack as shown in the figure until a click is heard.

Removing the battery pack from the DVD camcorder

1. Open up the LCD screen 90 degrees with your finger.
2. Slide the **BATT.** (battery release) switch in the direction as shown in the figure and pull out the battery pack.



WARNING

Insert the battery pack in the accurate direction as shown in the figure.
When the battery pack is wrongly inserted, it may cause malfunction of the DVD camcorder and battery pack.

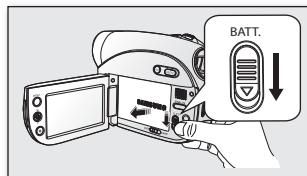
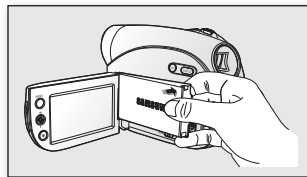
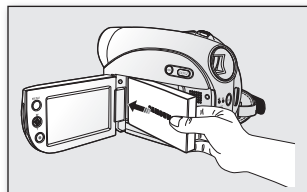


- It is recommended that you purchase one or more additional battery packs to allow continuous use of your DVD camcorder.
- Additional battery packs are available at your local Samsung dealer.
- If the DVD camcorder will not be in use for a while, remove the battery from the DVD camcorder.

Use only Samsung-approved battery packs. Do not use batteries from other manufacturers.

Otherwise, there is a danger of overheating, fire or explosion.

Samsung is not responsible for problems occurring due to using unapproved batteries.



About battery packs

- The battery pack should be recharged in an environment that is between 0°C (32°F) and 40°C (104°F). However, when it is exposed to cold temperatures (below 0°C (32°F)), its usage time becomes reduced and it may cease to function. If this happens, place the battery pack in your pocket or other warm, protected place for a short time, then re-insert it to the DVD camcorder.
- Do not put the battery pack near any heat source (i.e. fire or a heater).
- Do not disassemble, apply pressure to, or heat the battery pack.
- Do not allow battery pack terminals to be short-circuited. It may cause leakage, heat generation, induce overheating or fire.

Maintaining the battery pack

- The recording time is affected by temperature and environmental conditions.
- The recording time shortens dramatically in a cold environment. The continuous recording times in the user manual are measured using a fully charged battery pack at 25°C (77°F). As the environmental temperature and conditions vary, the remaining battery time may differ from the approximate continuous recording times given in the instructions.
- We recommend only using the original battery pack that is available from your Samsung retailer. When the battery reaches the end of its life, please contact your local dealer. The batteries have to be treated as chemical waste.
- Make sure that the battery pack is fully charged before starting to record.
- When fully discharged, a battery pack damages the internal cells. The battery pack may be prone to leakage when fully discharged.
- Remove the battery from the camcorder when it is not in use. Even when the power is switched off, the battery pack will still discharge if it is left attached to the DVD camcorder.
- For power saving purposes, the DVD camcorder enters the sleep mode automatically if no operation is performed for 3 minutes in the **STBY** mode and thumbnail index view. If no operation is made for 3 more minutes while the unit is sleep mode, the camcorder turns off automatically. However, if any operation is made, the DVD camcorder comes out of sleep mode. This function works only if **"Auto Power Off"** is set to **"6 Min."** → page 80
- Make sure that the battery pack fits firmly into place. Do not drop the battery pack as it may cause damage.

About the battery life

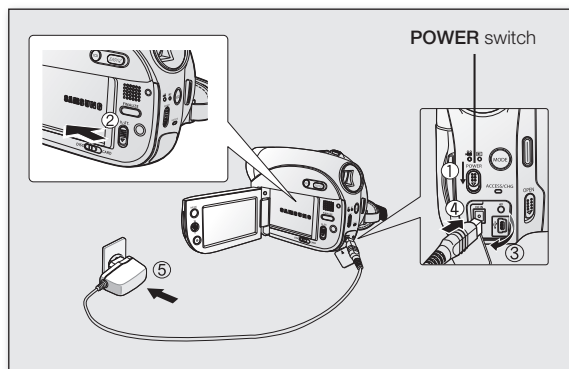
Battery capacity decreases over time and through repeated use.

If decreased usage time between charges becomes significant, it is probably time to replace it with a new one. Each battery's life is affected by storage, operating and environmental conditions.

preparation

Charging the battery pack

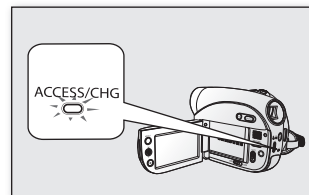
- Use the IA-BP80W battery pack only.
 - The battery pack may be charged a little at the time of purchase.
1. Slide the **POWER** switch downwards to turn off the power.
 2. Open the LCD screen and attach the battery pack to the DVD camcorder. ➔page 16
 3. Open the DC IN/USB/AV jack cover.
 4. Connect the AC power adaptor to the DC IN jack of your DVD camcorder.
 5. Connect the AC power adaptor to a wall socket.
 - The **ACCESS/CHG** (charging) indicator lights up in orange and charging starts. The **ACCESS/CHG** (charging) indicator lights up in green when the battery is fully charged.
 6. Once charged, disconnect the AC power adaptor from the DC IN jack on your DVD camcorder.
 - Even with the power switched off, the battery pack will still discharge if it is left attached to the DVD camcorder. It is recommended that you remove the battery pack from the DVD camcorder.



Charging indicator

The color of the **ACCESS/CHG** (charging) indicator indicates the power or charging state.

- If the battery has been fully charged, the charging indicator is green.
- If you are charging the battery, the color of the charging indicator is orange.
- If an error occurs while the battery pack is in charging, the charging indicator blinks orange.



Charging, recording and playback times with a fully charged battery pack (with no zoom operation, etc.)

For your reference, the approximate time with a fully charged battery pack:

Battery Pack			
Charging time		1 hr 50 min	
Quality		Continuous recording time	Playback time
Super Fine	LCD	50min	55min
	Viewfinder		
Fine	LCD	60min	65min
	Viewfinder		
Normal	LCD	70min	75min
	Viewfinder		

- The time is only for reference. Figures shown above are measured under Samsung's test environment, and may differ from your actual use.
- The charging time will vary depending on the remaining battery level.

Continuous recording time (without zoom)

The times shown in the table reflect the available recording time when the DVD camcorder is in the recording mode without using any other functions. In actual recording, the battery pack may discharge 2-3 times faster than this reference since the record start/stop and zoom are being operated, and playback is performed. Assume that the recordable time with a fully charged battery pack is between 1/2 and 1/3 of the time in the table, so prepare enough battery packs to allow for the time you are planning to record on the DVD camcorder.

Note that the battery pack discharges faster in a cold environment.

preparation

Using the DVD camcorder with the AC power adaptor

It is recommended that you use the AC power adaptor to power the DVD camcorder from a household AC outlet when you perform settings on it, finalize a disc, play back, or edit images, or use it indoors. ➔page 18



- Be sure to use the provided AC power adaptor to power the DVD camcorder. Using other AC power adaptors could cause electric shock or result in fire.
- The AC power adaptor can be used around the world. An AC plug adaptor is required in some foreign countries. If you need one, purchase it at your local Samsung dealer.



- Before detaching the power source, make sure that the DVD camcorder's power is turned off. Failure to do so can result in DVD camcorder malfunction.
- Use a nearby wall outlet when using the AC power adaptor. Disconnect the AC power adaptor from the wall outlet immediately if any malfunction occurs while using your DVD camcorder.
- Do not use the AC power adaptor in a narrow space, such as between a wall and furniture.

BASIC DVD CAMCORDER OPERATION

Turning the DVD camcorder on and off

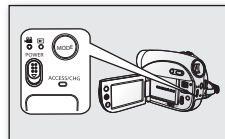
You can turn the camcorder on or off by sliding the **POWER** switch down.

Selecting the operating modes

- Set the operation mode by adjusting the **Storage mode** switch (SC-DX103/DX105 only) and **MODE** button before recording or operating any functions.
 - DVD camcorder mode: To record movie on a DVD disc. ➔ page 33
 - Digital camera mode: To record movie or photo images on a memory card. ➔ pages 56~57
- Press the **MODE** button to set Record(📹) or Play(📺) mode. Each press of the **MODE** button toggles between the Record(📹) mode and Play(📺) mode.



When the DVD camcorder is turned on, the self-diagnosis function operates and a message may appear. In this case, refer to warning indicators and messages (on pages 103~105) and take corrective action.



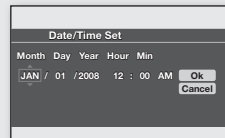
<DVD camcorder record mode>



<DVD camcorder play mode>

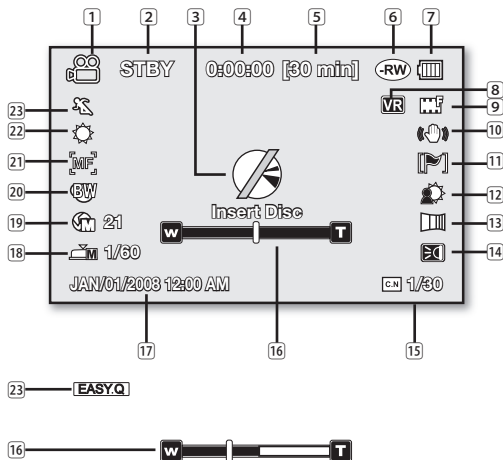
When using this camcorder first time

- When you use your DVD camcorder for the first time or you reset it, you will see the “**Date/Time Set**” screen for the startup display. If you do not set the date and time, the “**Date/Time Set**” screen appears every time you turn on your camcorder.



preparation

SCREEN INDICATORS

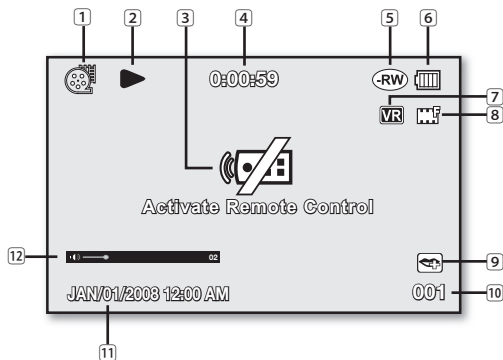


DVD camcorder (disc) record mode

- | | |
|----|--|
| 1 | Movie record mode |
| 2 | Operating mode (STBY (standby) or ● (recording)) |
| 3 | Warning indicators and messages |
| 4 | Time counter (movie recording time) |
| 5 | Remaining time |
| 6 | Storage media (disc) |
| 7 | Battery info.(remaining battery level) |
| 8 | Disc format type (DVD-RW disc only) |
| 9 | Quality |
| 10 | Anti-Shake (DIS) |
| 11 | Wind Cut |
| 12 | Back Light |
| 13 | Fader* |
| 14 | Light* (SC-DX105 only) |
| 15 | C. Nite* |
| 16 | Zoom/Digital Zoom position* |
| 17 | Date/Time |
| 18 | Manual Shutter* |
| 19 | Manual Exposure* |
| 20 | Digital Effect |
| 21 | Manual Focus* |
| 22 | White Balance |
| 23 | Scene Mode (AE)/ EASY.Q |



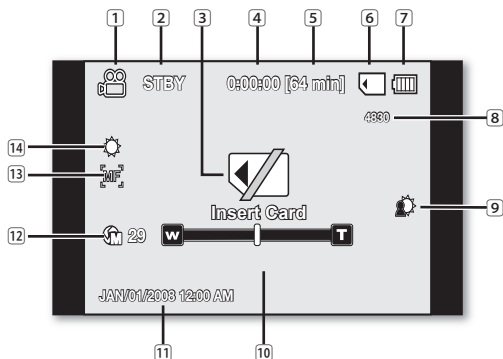
- This OSD indicators are based on using a DVD-RW disc.
- The above screen is an example for explanation: It is different from the actual display.
- Functions marked with * will not be retained when the DVD camcorder is powered on after turning it off.
- The battery indicator appears 8 seconds after power on. If the battery is low, it appears right after power on.



DVD camcorder (disc) play mode

- | | |
|----|--|
| 1 | Movie play mode |
| 2 | Operating status (Play/Pause) |
| 3 | Warning indicators and messages |
| 4 | Time code (elapsed time) |
| 5 | Storage media (disc) |
| 6 | Battery info (remaining battery level) |
| 7 | Disc Format (-RW Video/VR mode only) |
| 8 | Quality |
| 9 | Voice plus |
| 10 | Movie No. |
| 11 | Date/Time |
| 12 | Volume control |

preparation

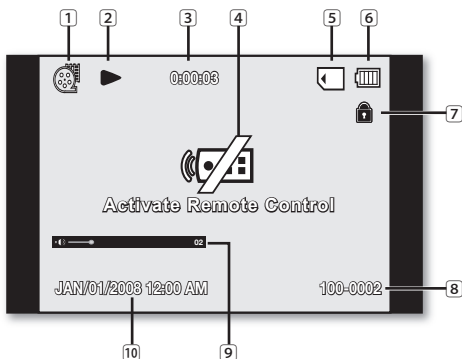


Digital camera (memory card) record mode

- | | |
|----|---|
| 1 | Record mode |
| 2 | Operating mode (STBY (standby) or ●(recording)) |
| 3 | Warning indicators and messages |
| 4 | Time counter (movie recording time) |
| 5 | Remaining time |
| 6 | Storage media (memory card) |
| 7 | Battery info (remaining battery level) |
| 8 | The total number of recordable photos |
| 9 | Back Light |
| 10 | Zoom position |
| 11 | Date/Time |
| 12 | Manual Exposure* |
| 13 | Manual Focus* |
| 14 | White Balance |



The digital camera mode is for models SC-DX103/
DX105 only.



Digital camera (memory card) play mode (Video)

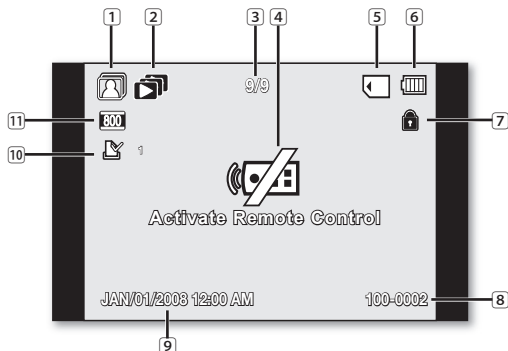
- 1 Video play mode
- 2 Operating status (Play/Pause)
- 3 Time code (elapsed time)
- 4 Warning indicators and messages
- 5 Storage media (memory card)
- 6 Battery info (remaining battery level)
- 7 Erase Protection
- 8 File Name (folder-file name)
- 9 Volume control
- 10 Date/Time

Digital camera (memory card) play mode (Photo)

- 1 Photo play mode
- 2 Slide Show
- 3 Image counter (current image/total number of recorded images)
- 4 Warning indicators and messages
- 5 Storage media (memory card)
- 6 Battery info (remaining level)
- 7 Erase Protection
- 8 File Name (folder-file name)
- 9 Date/Time
- 10 Print Mark(DPOF)
- 11 Photo size



The digital camera mode is for models SC-DX103/ DX105 only.



preparation

USING THE DISPLAY (I/O) BUTTON

Switching the information display mode

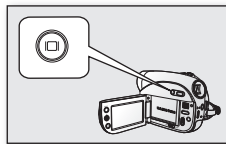
You can switch between the on-screen information display modes:

Slide the **POWER** switch downwards to turn on the power, and then press the Display (I/O) button.

Each press of the Display button toggles the OSD (On Screen Display) function on and off.

- **Full display mode:** All information will appear.
- **Minimum display mode:** Only operating status indicators will appear.

If the DVD camcorder has warning information, a warning message will appear.

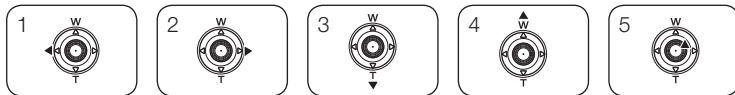
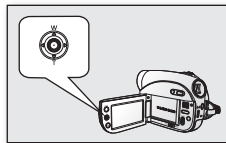


USING THE JOYSTICK

The **Joystick** is used to make a selection and to move the cursor left, right, up and down.

Using the **Joystick**, you can easily make your selection and navigate the menu.

1. Move to a previous menu item / Adjust the selected item (to the left).
2. Move to a sub menu item / Adjust the selected item (to the right).
3. Move to a lower menu item.
4. Move to an upper menu item.
5. Press to select the chosen item (Select).



USING THE LCD SCREEN

Adjusting the LCD screen

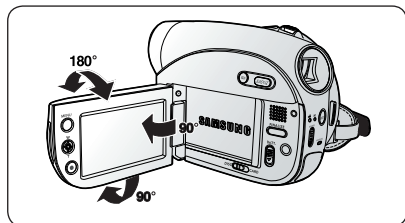
1. Open up the LCD screen 90° with your finger.
2. Rotate it to the best angle to record or play.



Do not lift the DVD camcorder by holding the LCD screen.



- Over-rotation may cause damage to the inside of the hinge that connects the LCD screen to the DVD camcorder.
- See page 79 to adjust brightness and color of the LCD screen.



USING THE VIEWFINDER

You can view pictures through the viewfinder or see correct images when the picture on the LCD screen is poor.

The viewfinder will work when the LCD screen is closed.

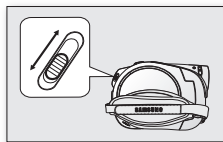
Adjusting the focus

The focus adjustment knob of the viewfinder enables individuals with vision problems to see clearer images.

1. Close the LCD screen.
2. Use the focus adjustment knob of the viewfinder to focus the picture.



Viewing the sun or any strong light source through the viewfinder for a prolonged period may be harmful, or cause temporary impairment.



preparation

INITIAL SETTING: OSD LANGUAGE & DATE AND TIME

- Initial setting is available in all operating modes. ➔page 21
- To read the menus or messages in your desired language, set the OSD language.
To store the date and time during record, set the date/time.
- Set the date and time when using this camcorder for the first time. ➔page 21
You can also set the date and time using the setting menu. ➔page 29

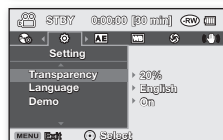
Selecting the OSD language

You can select the desired language to display the menu screen and the messages.

1. Press the **MENU** button.
 - The menu will appear.
2. Move the **Joystick** right or left to select “**Setting**.”
 - The setting menu will appear.
3. Move the **Joystick** up or down to select “**Language**,” then press the **Joystick**.
4. Move the **Joystick** up or down to select the desired language, then press the **Joystick**.
5. To exit, press the **MENU** button.



- Even if the battery pack or AC power were removed, the language setting would still be preserved.
- “**Language**” options may be changed without prior notice.



Setting the date and time

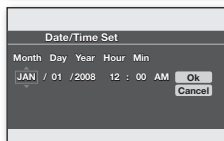
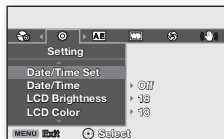
Set the date and time when using this DVD camcorder for the first time.

The recording date/time is recorded on the movie/photo(SC-DX103/DX105 only) images.

1. Press the **MENU** button.
 - The menu will appear.
2. Move the **Joystick** right or left to select “**Setting**.”
 - The setting menu will appear.
3. Move the **Joystick** up or down to select “**Date/Time Set**,” then press the **Joystick**.
 - The month will be selected.
4. Move the **Joystick** right or left to the desired item(Month, Day, Year, Hour, Min AM/PM) and then move the **Joystick** up or down to set values.
5. To save the date and time, move the **Joystick** right or left to “**Ok**,” then press the **Joystick**.
 - To cancel the setting, move the **Joystick** to select “**Cancel**,” then press the **Joystick**.
6. To exit, press the **MENU** button.



- If the button type battery is exhausted, the date and time will be reset as “**JAN/01/2008 12:00 AM**.”
Replace with the button type battery for internal clock. ➔page 14
- You can set the year up to 2040.
- The date and time do not appear during recording, but they are automatically recorded on the storage media, and can be displayed when you turn the date and time display on.



Turning the date and time display on/off

To switch the date and time display on or off, access the menu and change the date/time mode. ➔page 79

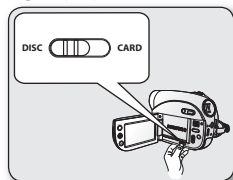
DVD camcorder mode: before recording

SELECTING THE STORAGE MEDIA (SC-DX103/ DX105 only)

You can record movies onto a DVD disc, and you can record both movies and photos onto a memory card. With models SC-DX103/DX105, you must select the desired storage media before starting recording or playback.

Selecting the desired storage

- Set the **Storage mode** switch to **DISC** or **CARD**. (**DISC ↔ CARD**)
 - DVD camcorder mode: To record movies on a DVD disc. ↪ page 33
 - Digital camera mode: To record movies or photo images on memory card.
↪ pages 56~57

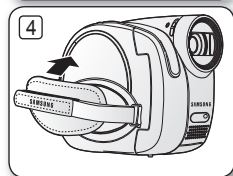
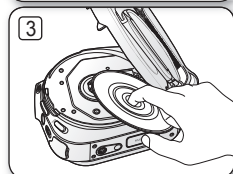
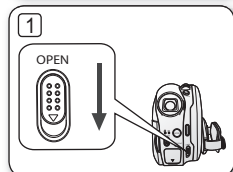


INSERTING AND REMOVING A DISC

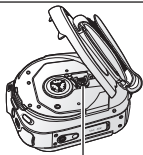
- When inserting a disc or closing the disc cover, do not apply excessive force. It may cause a malfunction.
- You cannot open the disc cover while loading.
- **You can use a new 3 1/2 inch(8cm) DVD-RW, DVD+RW, DVD-R or DVD+R DL (Dual Layer) disc for movie recording. Photos can not be recorded onto a DVD disc.**

Inserting a disc

1. Slide the **OPEN** switch in the direction of the arrow.
 - The disc cover will partially open.
2. Gently open the cover the rest of the way by hand.
3. Push the disc into the disc compartment until a click is heard.
 - The recording side of the disc must face the inside of the DVD camcorder.
 - Do not touch the pickup lens.
4. Gently push the disc cover to close it.
 - Once inserted, the disc is recognized and the **ACCESS/CHG** indicator blinks. Do not cut off the power supply during this time. Do not shake nor apply impact. It may cause a malfunction.
 - Set the **Storage mode** switch to **DISC**. (SC-DX103/ DX105 only)



- Move the grip belt so it does not interfere with inserting or ejecting the disc.
- The disc cover can be opened when the device is connected to an AC power adaptor or the battery pack, even if the power is off.



pickup lens

Caution

This product utilises a laser. Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. Do not open covers and do not look inside the product if interlock mechanism is damaged.

Warning

Be careful not to damage the interlock mechanism.

When using a new disc: formatting a new disc

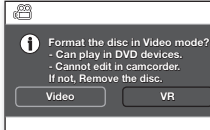
Formatting may be required if a new disc is inserted.

Recognition of the disc will start.

For a DVD-R/+R DL disc: Formatting will automatically begin.

For a DVD-RW disc: The Format menu is offered. Select the recording format, Video mode or VR mode.

Format the disc in the “**Disc Manage**” menu when you want to format again. ➡ page 50

Differences between Video and VR mode	Video (Video Mode) : If the disc has been finalized, you will be able to play the disc on most DVD players/recorders/drives.	
	VR (VR Mode) : You can edit the disc on a DVD camcorder, but playback is possible only on a DVD recorder that supports VR mode.	

- Refer to page 8 for finalized disc compatibility. <When a DVD-RW disc is formatted.>


For a DVD+RW disc: The Format menu is offered. Formatting makes the recorded disc new and reusable by deleting all the data recorded on the disc.

DVD camcorder mode: before recording

Removing a disc

1. Slide the **OPEN** switch in the direction of the arrow.
 - The disc cover will partially open.
2. Gently open the cover the rest of the way by hand.
3. Remove the disc.
 - While pushing down the center portion of the disc spindle, pick up the disc by the edges to remove.
4. Gently push the disc cover to close it.



- The Finalize/Format functions are not available when the battery level is low (). Use the AC power adaptor when finalizing/formatting a DVD disc.
- You cannot open the disc cover while loading. Wait until disc loading is completed.
- Do not operate the **POWER** switch or remove a disc while accessing it. Doing so may damage the disc or the data on it.
- You can not proceed with recording when the disc cover is open. An icon and message are shown that recording is impossible with the disc cover open.
- It may take longer to open the cover when using a DVD+RW. More than 5 minutes may be required if there are a lot of movie images recorded on the disc.

RECORDABLE TIME

Recordable time for movie images

Storage Capacity	DVD+RW/-RW/-R		DVD+R DL
	1.4GB		2.6GB
Movie Quality			
Super Fine	Approx. 20min		Approx. 35min
Fine	Approx. 30min		Approx. 53min
Normal	Approx. 60min		Approx. 106min

Actual formatted capacity may be less as the internal firmware uses a portion of the memory.

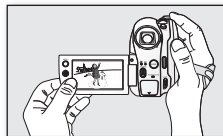
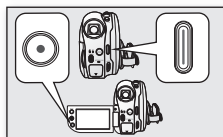
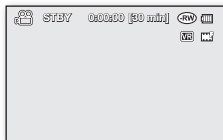


- The above figures are measured under Samsung's standard recording test conditions and may differ depending on actual use.
- The DVD camcorder provides three quality options for movie recordings: "**Super Fine**," "**Fine**" and "**Normal**." The higher the quality setting is, the more memory is used.
- The compression rate increases when choosing lower quality settings. The higher the compression rate is, the longer the recording time will be. However, the picture quality will be lower.
- Movie image files recorded on other equipment are not playable on this DVD camcorder.

DVD camcorder mode: recording/playback

RECORDING MOVIE IMAGES ON A DISC

- Set the **Storage mode** switch to **DISC** before recording on a disc.
(SC-DX103/DX105 only) ➡ page 30
 - You can record movie images using the remote control. (SC-DX105 only) ➡ page 13
 - This DVD camcorder provides two **Recording start/stop** buttons. One is on the rear side of the camcorder and the other is on the LCD panel. Select the **Recording start/stop** button that works best for you.
1. Turn the DVD camcorder on.
 - Connect a power source to the DVD camcorder.
(A battery pack or an AC power adaptor)
 - Slide the **POWER** switch downwards to turn the DVD camcorder on.
 - Set the **Storage mode** switch to **DISC**. (SC-DX103/DX105 only) ➡ page 30
 2. Check the subject on the LCD screen. (Lens and LCD)
 - Set the **Lens open/close** switch to open (O). ➡ page 10
 3. Press the **Recording start/stop** button.
 - The (●) recording indicator will display, and recording will start.
 - Press the **Recording start/stop** button again to stop recording.
 4. When recording is finished, turn the DVD camcorder off.




DVD camcorder mode: recording/playback




- The recorded movie image size is 720X480.
- Eject the battery pack when you have finished recording to prevent unnecessary battery power consumption.
- For on-screen information display, see page 22.
- For approximate recording time, see page 32.
- Sound is recorded from the internal stereo microphone at the front of the DVD camcorder. Take care that this microphone is not blocked.
- Before recording an important movie, make sure to test the recording function by checking if there is any problem with the audio and video recording.
- For various functions available when you record movie images. ➤pages 65~77
- Do not operate the power switch or remove a disc while accessing it. Doing so may damage the disc or the data on it.
- If you set the storage media to DVD, up to 253 movie images can be created on DVD-R/+RW/+R DL/ -RW (Video mode) discs, and up to 999 on DVD-RW (VR mode).
- You cannot proceed with recording when the disc cover is open. An icon and message are shown that recording is impossible with the disc cover open.
- If you press the **Recording start/stop** button while a menu operation is in process, the DVD camcorder starts to record.
- **If you turn the DVD camcorder off while recording, turn it on again with the storage media inserted in it: Repair of the storage media will be executed automatically with a message.** Do not turn off the power or remove storage media while the DVD camcorder is recovering it, or it will damage the data or the storage media itself. The data recovery completes within a few minutes but sometimes it may take more time. Use the AC power adaptor when recovering data.

RECORDING WITH EASE FOR BEGINNERS (EASY.Q MODE)

- With the EASY.Q function, most of the DVD camcorder settings are automatically adjusted, which relieves you of detailed adjustments.
- Slide the **POWER** switch downwards to turn on the power.
 - Set the **Storage mode** switch to **DISC**. (SC-DX103/DX105 only) ➔ page 30
 - Press the **EASY Q** button.
 - When you press the **EASY Q** button, most functions are set to off and the following functions are set to "Auto."
 - "Scene Mode(AE)," "White Balance," "Exposure," "Anti-Shake(DIS)," "Digital Effect," "Focus," "Shutter," "Back Light," "C. Nite" etc.
 - The (**EASY.Q**) and Anti-Shake(DIS) () indicators appear on the screen at the same time.
 - To record movie images, press the **Recording start/stop** button.

To cancel EASY.Q mode

Press the **EASY Q** button once again.

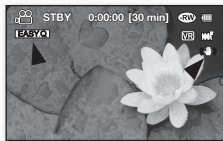
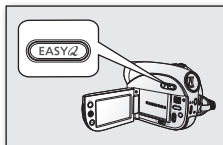
- The (**EASY.Q**) and Anti-Shake(DIS) () indicators disappear from the screen.
- Almost all the settings will return to the settings that were set prior to activating EASY.Q mode.
- You cannot cancel the EASY.Q mode during recording.



Unavailable buttons during EASY.Q operation.

The following controls are unavailable because the items are automatically set. And the corresponding message ("Release the EASY.Q!") may appear if unavailable operations are attempted.


- Menu** button, **Joystick**.
- Release the EASY.Q function if you want to add any effect or settings to the images.
- The EASY.Q mode settings are released when the DVD camcorder is turned off.

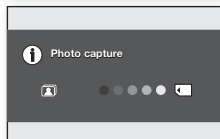
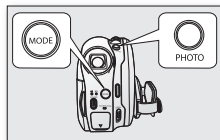


DVD camcorder mode: recording/playback

CAPTURING STILL IMAGES DURING MOVIE IMAGE PLAYBACK(SC-DX103/ DX105 only)

- This function works only in the Play mode. ➡page 21
 - If you press the **PHOTO** button during playback, it stops playing and saves one image of the current movie scene that is paused to the memory card.
1. Slide the **POWER** switch downwards to turn on the power and set the **Storage mode** switch to **DISC**.
 - Press the **MODE** button to set the Play mode. ➡page 21
 - The thumbnail index screen appears.
 2. Use the **Joystick** to select the desired movie image.
 - To change the current thumbnail page, move the **Joystick** down to highlight the page bar, then move the **Joystick** right or left to select the page.
 3. Press the **Joystick**.

The selected file fills the screen and is played automatically.
 4. Press the **PHOTO** button at the desired point.
 - A shutter sound is heard. The photo image is recorded on the memory card and the "Photo capture" message appears.
-  • The still images captured from the movie images to the storage media are saved in 800x600 format.



ZOOMING

Use the zoom lever on the top of the camcorder.

This DVD camcorder allows you to record using optical 34x power zoom and 1200x digital zoom.

- Zoom lever is on the top of the camcorder.
- You can also use zoom function by moving the **Joystick (W/T)** up or down.

To zoom in

Slide the zoom lever towards **T** (telephoto).

To zoom out

Slide the zoom lever towards **W** (wide-angle).

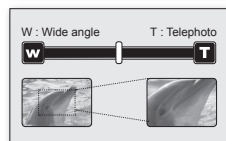
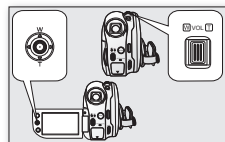
- The farther you slide the zoom lever, the quicker the zoom action.
- Zoom magnification over 34x is done through digital image processing, and is, therefore, called digital zoom. Digital zooming is possible up to 1200x.

Set "**Digital Zoom**" to the desired value. ➔page 76

You can set the digital zoom up to 1200x in movie mode.





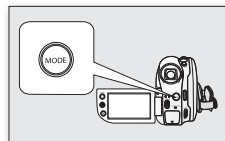
- Be sure to keep your finger on the Zoom lever. If you move your finger off the zoom lever, the operation sound of the Zoom lever may be also recorded.
- The minimum possible distance between camcorder and subject while maintaining sharp focus is about 1 cm (about 0.39 inch) for wide angle and 50 cm (about 19.68 inch) for telephoto.
- The focus changes when zooming after focusing manually. Focus automatically or seize the desired scene by zooming before focusing manually. ➔page 70
- Optical digital zoom preserves the movie quality, but during digital zoom the image quality may suffer.



DVD camcorder mode: recording/playback

PLAYING MOVIE IMAGES

- This function works only in the Play mode. ➔page 21
 - You can switch to the Play mode by using the **MODE** button.
 - You can find a desired movie image quickly using thumbnail index views.
 - Use the playback-related buttons on the remote control. (SC-DX105 only) ➔page 13
1. Slide the **POWER** switch downwards to turn on the power and open the LCD screen.
 - Set the **Storage mode** switch to **DISC**. (SC-DX103/ DX105 only) ➔page 30
 - Adjust brightness or color of the LCD screen. ➔page 79
 2. Press the **MODE** button to set the Play mode.
 - The thumbnail index view appears. The thumbnail highlight is on the latest created or played file.
 - To change the current thumbnail page, move the **Joystick** down to highlight the page bar, then move the **Joystick** right or left to select the page.
 3. Move the **Joystick** to select the desired movie image, then press the **Joystick**.
 - The selected file fills the screen and is played automatically.
 - To stop playback, move the **Joystick** down.
-  • Press **Display** () button to toggle the OSD (On Screen Display) function on and off.
- Depending on the amount of data to be played back, it may take some time for the playback images to appear.
 - Movies edited on a PC may not be displayed on this DVD camcorder.
 - Movies recorded on another camcorder may not be played on this DVD camcorder.



Adjusting the volume

- You can control the volume by using the zoom lever during playback.
- You can hear the recorded sound from the built-in speaker.
- The level can be adjusted anywhere between 0 and 19.



If you close the LCD screen while playing, you will not hear the sound from the speaker.

Various playback operations

Playback / Pause / Stop

- Playback and Pause functions alternate when you press the **Joystick**.
- Move the **Joystick** down to stop playback.
- You can do the same operation by using the remote control (⏮/⏭). (SC-DX105 only)

Search playback

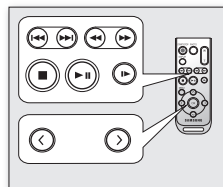
- Move the **Joystick** right or left and hold during playback.
 - RPS (Reverse Playback Search) rate: x2 → x16 → x2
 - FPS (Forward Playback Search) rate: x2 → x16 → x2
- To resume normal playback, press the **Joystick**.
- You can do the same operation by using the remote control (⏮/⏭). (SC-DX105 only)

Skip playback

- Move the **Joystick** right or left during playback.
 - If you move the **Joystick** left within 3 seconds after the movie image starts, the previous image is played back.
 - If you move the **Joystick** left 3 seconds after the movie image starts, the current image starts from the beginning.
 - If you move the **Joystick** right, the next image is played back.
- You can do the same operation by using the remote control (⏮/⏭). (SC-DX105 only)

Slow playback

- Pause the playback by pressing the **Joystick**, then move the **Joystick** right or left. The movie image plays forward or reverse at the 1/2x speed.
- To resume normal playback, press the **Joystick**.
- Slow playback continues for 3 minutes.
- You can do the same operation by using the remote control (⏮). (SC-DX105 only)
- When pressing the (⏮) or (⏭) buttons on the remote control during slow playback, it slowly plays back in reverse or forward. (SC-DX105 only)



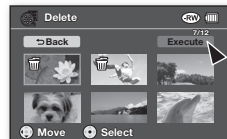
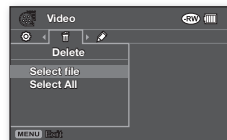
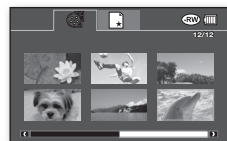
<SC-DX105 only>

DVD camcorder mode: editing movie image

DELETING IMAGES



- This function works only in the Play mode.
 - You can delete undesired movie images recorded on the disc.
 - This function works only on a DVD-RW disc(VR mode).
 - An image that has been deleted cannot be recovered.
- Slide the **POWER** switch downwards to turn on the power.
 - Set the **Storage mode** switch to **DISC**. ↪page 30
 - Press the **MODE** button to set the Play mode.
 - The thumbnail index view appears.
 - Press the **MENU** button.
 - Move the **Joystick** right or left to select “Delete.”
 - Move the **Joystick** up or down to select the desired option (“Select file” or “Select All”), then press the **Joystick**.
 - “Select file”: Deletes the individual image.
 - To delete the individual image, use the **Joystick** to select the image to delete. The (🗑️) indicator is displayed on the selected images. Pressing the **Joystick** toggles between the thumbnail image being selected for deletion (the (🗑️) indicator appears on image) or not (the (🗑️) indicator is removed from image). Move the **Joystick** up to select “Execute,” then press the **Joystick**.
 - “Select All”: Deletes all images.
 - Move the Joystick up to select “Execute,” then press the **Joystick**.
 - The message according to the selected option will appear. Move the **Joystick** right or left to select “Yes,” then press the **Joystick**.
 - After completion, the selected images will be deleted. (Accordingly, the deleted files also disappear in playlist. ↪page 45)



DELETING A SECTION OF A MOVIE IMAGE (PARTIAL DELETE)



- This function works only in the Play mode. ➡ page 21
 - Set the **Storage mode** switch to **DISC**. (SC-DX103/DX105 only) ➡ page 30
 - A movie image can be partially deleted.
1. Press the **MENU** button, then move the **Joystick** right or left to select **"Edit."**
 2. Press the **Joystick** to select **"Partial Delete."**
 3. Use the **Joystick** to select the desired movie image, then press the **Joystick**.
 - The selected file fills the screen with paused.
 - To return, use the **Joystick** to select **"Back,"** then press the **Joystick**.
 4. Move the **Joystick** right to play the movie image.
 5. Press the **Joystick** at the start point you want to delete.
 - The start point of deletion will be marked with **"▼."**
 6. Move the **Joystick** right to search the end point of deletion. Press the **Joystick**.
 - The end point of deletion will be marked with **"▼."**
 7. Press the **Joystick** to delete the selected part.
 - The message **"Partial Delete? Selected part of a file will be deleted."** will appear.
 8. Move the **Joystick** left to select **"Yes,"** then press the **Joystick**.
 - The selected part of the movie image will be deleted.



- Do not remove the battery pack or the AC power adaptor while the partial deletion is in progress. The file can be damaged.
- A deleted part of the movie image can not be recovered.
- Partial deletion is not available when the recording is less than 3 seconds.
- Partial deletion is not available when the section or remaining time is less than 3 seconds.
- When partial deletion is executed, related movie images in the playlist are partially deleted.



DVD camcorder mode: editing movie image

PLAYLIST

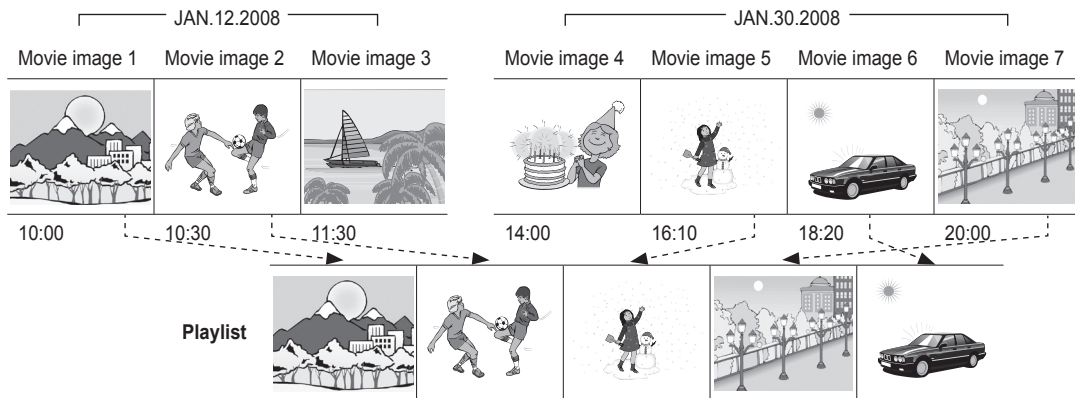


What's a Playlist?







- You can create a playlist on the same disc by gathering your favorite scenes from the recorded movie images. When creating or deleting a playlist, the original movie image will not be erased. Adding or deleting movie images from a playlist does not affect the original movie images.
- This function works only on a DVD-RW disc (VR mode).
You should format the DVD-RW to VR mode before recording. ➔page 50

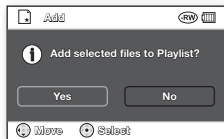
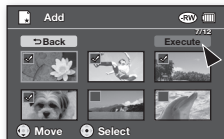
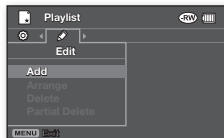
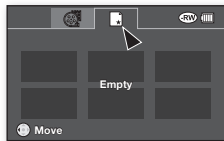
Example: You have recorded a few scenes on a DVD disc. You want to save the original recording, but you also want to create a digest by putting your favorite scenes together.

In this case, you can create a playlist by selecting your favorite scenes, leaving the original recording as it is.



Creating a playlist

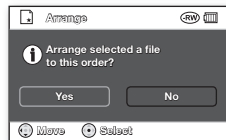
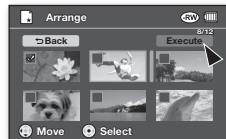
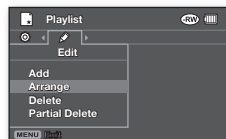
- This function works only in Play mode.
 - Set the **Storage mode** switch to **DISC**. (SC-DX103/DX105 only) ➡ page 30
 - You can create a playlist by gathering your favorites from the recorded movie images.
 - You can create only one playlist.
1. Move the **Joystick** to select the playlist() tab in the thumbnail index view.
 - Thumbnail index view of the playlist appears.
 2. Press the **MENU** button, then move the **Joystick** right or left to select “Edit.”
 3. Move the **Joystick** up or down to select “Add,” then press the **Joystick**.
 4. Use the **Joystick** to select the movie images to add to the playlist.
 - The () indicator is displayed on the selected movie images.
 - Pressing the **Joystick** toggles between the movie thumbnail image being selected for creating a playlist (the () indicator appears on image) or not (the () indicator is removed from image).
 - To return, use the **Joystick** to select “Back,” then press the **Joystick**.
 5. Use the **Joystick** to select “Execute,” then press the **Joystick**.
 - The message “Add selected files to Playlist ?” appears.
 6. Move the **Joystick** right or left to select “Yes,” then press the **Joystick**.
 - The selected files are added to the playlist.
 - You can play a playlist in the same manner as you play a movie image. ➡ page 38
-  • If free space available on the disc is insufficient, delete unnecessary movie images.
- Up to 64 movie images can be included in the playlist.
 - When playing back the playlist, the counter refers to total counter of the playlist.
 - To return to the thumbnail index view of movie images, use the **Joystick** to select the play() tab.



DVD camcorder mode: editing movie image

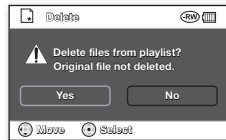
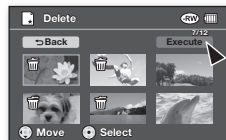
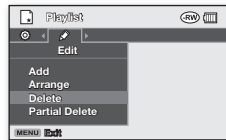
Arranging the order of movie images within a playlist

- This function works only in Play mode.
 - Set the **Storage mode** switch to **DISC**. (SC-DX103/DX105 only) ➡ page 30
 - You can arrange movie images within a playlist by moving them to the desired position.
1. Move the **Joystick** to select the playlist (□) tab in the thumbnail index view.
 - Thumbnail index view of the playlist appears.
 2. Press the **MENU** button, then move the **Joystick** right or left to select "**Edit**."
 3. Move the **Joystick** up or down to select "**Arrange**," then press the **Joystick**.
 4. Use the **Joystick** to select the movie images to arrange.
 - The (✓) indicator is displayed on the selected movie image.
 - Pressing the **Joystick** toggles between the movie thumbnail image being selected for arrangement within the playlist (the (✓) indicator appears on image) or not (the (✓) indicator is removed from image).
 - A bar will also appear next to the selected movie image.
 5. Move the **Joystick** to select the desired position, then press the **Joystick**.
 - The selected file is arranged in the desired position.
 - To return, use the **Joystick** to select "**Back**," then press the **Joystick**.
 6. To execute, use the **Joystick** to select "**Execute**," then press the **Joystick**.
 - The message "Arrange selected a file to this order?" appears.
 7. Move the **Joystick** right or left to select "**Yes**," then press the **Joystick**.
 - The selected files are arranged in the selected position.




Deleting movie images from a playlist

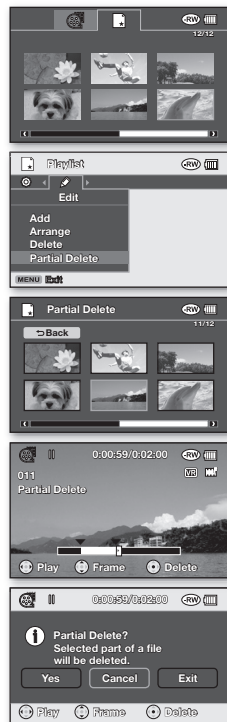
- This function works only in Play mode.
 - Set the **Storage mode** switch to **DISC**. (SC-DX103/DX105 only) ➡ page 30
 - You can delete undesired movie images within a playlist.
1. Move the **Joystick** to select the playlist (📁) tab in the thumbnail index view.
 - Thumbnail index view of the playlist appears.
 2. Press the **MENU** button, then move the **Joystick** right or left to select “**Edit**.”
 3. Move the **Joystick** up or down to select “**Delete**,” then press the **Joystick**.
 4. Use the **Joystick** to select the movie images to delete.
 - The (🗑️) indicator is displayed on the selected movie image.
 - Pressing the **Joystick** toggles between the movie thumbnail image being selected for deleting from the playlist (the (🗑️) indicator appears on image) or not (the (🗑️) indicator is removed from image).
 - To return, use the **Joystick** to select “**Back**,” then press the **Joystick**.
 5. Use the **Joystick** to select “**Execute**,” then press the **Joystick**.
 - The message “**Delete files from playlist? Original file not deleted.**” appears.
 6. Move the **Joystick** right or left to select “**Yes**,” then press the **Joystick**.
 - The selected files are deleted.



DVD camcorder mode: editing movie image

Deleting a section of movie image within a playlist

- This function works only in Play mode.
 - Set the **Storage mode** switch to **DISC**. (SC-DX103/DX105 only) ➡ page 30
 - You can delete a section of a movie image within a playlist.
1. Press the **MENU** button, then move the **Joystick** right or left to select “**Edit**.”
 2. Press the **Joystick** to select “**Partial Delete**.”
 3. Move the **Joystick** to select the desired movie image, then press the **Joystick**.
 - The selected file fills the screen with paused.
 4. Move the **Joystick** right to play the movie image.
 5. Press the **Joystick** at the start point you delete.
 - The start point of deletion will be marked with “▼.”
 6. Use the **Joystick** to search the end point of deletion. Press the **Joystick**.
 - The end point of deletion will be marked with “▼.”
 7. Press the **Joystick** to delete the selected part.
 - The message “**Partial Delete? Selected part of a file will be deleted.**” will appear.
 8. Move the **Joystick** left to select “**Yes**,” then press the **Joystick**.
 - The selected part of the movie image will be deleted.
-  Do not remove the battery pack or the AC power adaptor while the partial deletion is in progress. The file can be damaged.
- A deleted part of the movie image can not be recovered.
 - Partial deletion is not available when the recording time is less than 3 seconds.
 - Partial deletion is not available when the section or remaining time is less than 3 seconds.



DVD camcorder mode: disc manage

DISC FINALIZE



- This function works only in the Record mode ↘ page 21
- To play the contents of a DVD-RW/-R+R DL on other DVD players/recorders/drives, you must finalize the disc. When finalizing, there should be enough power in the battery. If the AC power adaptor is to be used, make sure that the jack is properly connected. A power cut during finalizing may prevent the disc from playing.

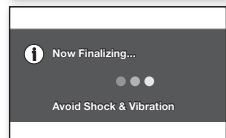
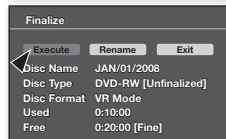
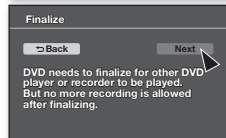
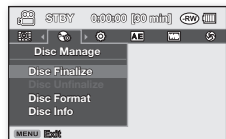
1. Slide the **POWER** switch downwards to turn on the power. ↘ page 21
2. Set the **Storage mode** switch to **DISC**. (SC-DX103/DX105 only) ↘ page 30
3. Press the **MENU** button, then move the **Joystick** right or left to select **"Disc Manage."**
4. Move the **Joystick** up or down to select **"Disc Finalize,"** then press the **Joystick**.
 - You can simply finalize the disc using the **FINALIZE** button on the DVD camcorder.
5. The message **"DVD needs to finalize for other DVD player or recorder to be played."** will appear. Move the **Joystick** right or left to select **"Next,"** then press the **Joystick**.
 - Disc information will appear.
6. Move the **Joystick** right or left to select **"Execute,"** then press the **Joystick**.
 - To exit, use the **Joystick** to select **"Exit,"** then press the **Joystick**.
7. Move the **Joystick** right or left to select **"Yes,"** then press the **Joystick**.
 - The message showing that the disc is being finalized will appear.



During finalizing, do not cause impact or vibration to your DVD camcorder. This could cause a malfunction.



- The finalize function is not available when the battery level is less than ().
- Once finalized, the movie images or a playlist in the disc cannot be deleted or edited.
- Time required for finalizing may differ by disc type.
- Refer to page 8 for finalized disc compatibility.
- Playback is not guaranteed in all DVD players/recorders/drives. For compatibility details, refer to your DVD players/recorders/drives owner's manual.
- Once the DVD-R/+R DL disc is finalized, you cannot re-record it in the DVD camcorder.
- You may play back DVD+RW discs on other devices without finalizing them.
- You cannot make an additional recording on a DVD-RW disc without unfinalizing it after it is finalized.



DVD camcorder mode: disc manage

Playing back on a PC with a DVD drive

The DVD disc can be played on a PC with a DVD-running media (DVD drive).

1. Turn on your PC.
2. Insert a finalized disc into the DVD drive of the PC.
 - DVD playback application software starts and the disc will play.
 - If DVD playback application does not start automatically, run the application by navigating through the start menu.



- Use a DVD drive compatible with 3 1/2 inch (8cm) disc.
- The recorded files on DVD may not play in 'Windows Media Player'.
- Microsoft, Windows and Windows logo are registered trademarks of Microsoft Corporation incorporated in the United States and/or other countries.
- Video and audio may pause or skip when you play back a DVD disc on your PC. If this occurs, copy the data into your hard disk drive.

Playing back a finalized disc on a DVD player / recorder

To playback a disc

You can playback finalized DVD-R/-RW (Video mode)/+R DL discs on DVD players/recorders. Playback is not guaranteed in all DVD players/recorders. For compatibility details, refer to your DVD player/recorder owner's manual.

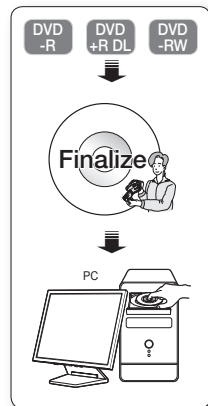
Most DVD players/recorders can play back a DVD+RW disc that has not been finalized.

- Refer to the page 8 for finalized disc compatibility.
 1. Turn on the DVD player/recorder.
 2. Insert the finalized DVD disc into the tray of a DVD player/recorder.

It may start playing automatically or press the PLAY button to start.
- For further details on playing back DVD discs, refer to the DVD player/recorder user's manual.



To playback DVD-RW discs recorded in VR mode:

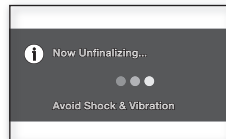
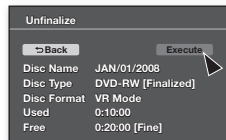
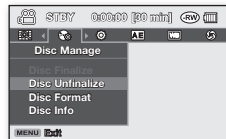
A finalized DVD-RW in VR mode can be played back in a DVD recorder that supports it.



DISC UNFINALIZE



- This function works only in the Record mode. ↪page 21
 - If a DVD-RW disc had been finalized in the VR mode or Video mode, you can unfinalize the disc for further recording. When unfinalizing, there should be enough power in the battery. If the AC power adaptor is to be used, make sure that the jack is properly connected.
1. Slide the **POWER** switch downwards to turn on the power. ↪page 21
 2. Set the **Storage mode** switch to **DISC**. (SC-DX103/ DX105 only) ↪page 30
 3. Press the **MENU** button, then move the **Joystick** right or left to select "**Disc Manage.**"
 4. Move the **Joystick** up or down to select "**Disc Unfinalize,**" then press the **Joystick**.
 - You can simply unfinalize the disc using the **FINALIZE** button on the DVD camcorder.
 - Disc information will appear.
 5. Move the **Joystick** to select "**Execute,**" then press the **Joystick**.
 - To exit, use the **Joystick** to select "**Back,**" then press the **Joystick**.
 6. The message "**Make the disc recordable?**" will appear. Move the **Joystick** right or left to select "**Yes,**" then press the **Joystick**.
 - The message showing that the disc is being unfinalized will appear, and the disc will be unfinalized.
-  **WARNING**
- The unfinalize function is not available when the battery level is less than .
 - During unfinalizing, do not cause impact or vibration to your DVD camcorder. This could cause a malfunction.



DVD camcorder mode: disc manage

DISC FORMAT

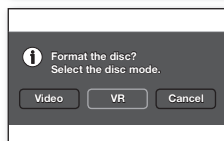
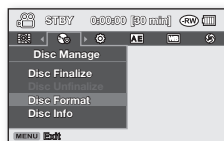


- This function works only in the Record mode. ➡page 21
- You can format a recorded disc for re-use. By formatting, all existing data will be deleted.

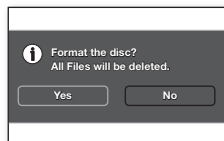
1. Slide the **POWER** switch downwards to turn on the power. ➡page 21
2. Set the **Storage mode** switch to **DISC**. (SC-DX103/DX105 only) ➡page 30
3. Press the **MENU** button, then move the **Joystick** right or left to select “**Disc Manage**.”
4. Move the **Joystick** up or down to select “**Disc Format**,” then press the **Joystick**.
 - When a DVD-RW disc is inserted, move the **Joystick** right or left to select “**Video**” or “**VR**” according to how you want to use the disc, then press the **Joystick**.
 - If a DVD+RW disc is inserted, move the **Joystick** to select “**Yes**,” then press the **Joystick**.



- The Format function is not available at the battery level under ().
- Formatting will delete all the recorded contents on a disc. Be careful not to delete data by mistake.
- Do not turn the power off in the middle of the formatting. The data recorded on a disc may be damaged.
- Be sure to use the AC power adaptor when formatting a disc so that the DVD camcorder does not turn off midway.
- See page 101 for more details on the disc format type.



<DVD-RW disc>



<DVD+RW disc>

DISC INFORMATION



- This function works only in the DVD camcorder record mode. ➡ page 21
- It shows you disc information such as the disc name, disc type, disc format, etc.

NOTICE : Make sure that you insert a disc. ➡ page 30

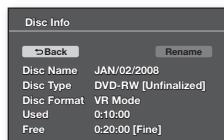
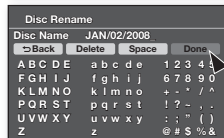
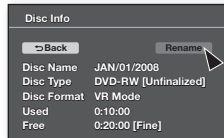
1. Slide the **POWER** switch downwards to turn on the power. ➡ page 21
2. Set the **Storage mode** switch to **DISC**. (SC-DX103/DX105 only) ➡ page 30
3. Press the **MENU** button, then move the **Joystick** right or left to select "**Disc Manage**."
4. Move the **Joystick** up or down to select "**Disc Info**," then press the **Joystick**.
 - "Disc Name," "Disc Type," "Disc Format," "Used" and "Free" will be displayed.
 - To return, move the **Joystick** right or left to select "**Back**," then press the **Joystick**.

To rename the disc

1. Move the **Joystick** right or left to select "**Rename**," then press the **Joystick**.
 - Disc Name screen will appear.
2. Use the **Joystick** to move the cursor to "**Delete**," then press the **Joystick** to delete the existing disc name.
3. Use the **Joystick** to select the desired characters and items, then press the **Joystick**.
4. Use the **Joystick** to select "**Done**," then press the **Joystick**.
 - The "**Disc Name**" will be changed.
 - To return move the **Joystick** right or left to select "**Back**," then press the **Joystick**.



- Disc information may appear depending on the disc type.



digital camera mode (SC-DX103/DX105 only)

INSERTING AND EJECTING A MEMORY CARD

- This DVD camcorder has multi card-slot for access to SD (Secure Digital) and MMC (MultiMediaCard) cards.
 - Some cards are not compatible depending on the memory card manufacturer and memory card type.

Inserting a memory card

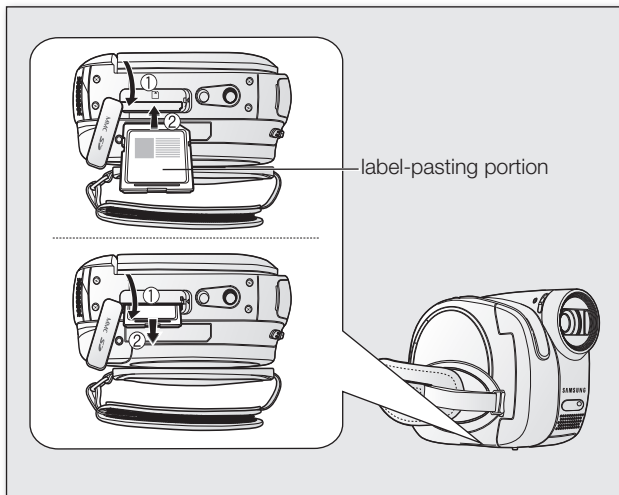
1. Open the memory card cover.
2. Insert the memory card into the slot until it softly clicks.
 - Make sure that the label-pasting portion is facing up and the camcorder is placed as shown in the figure.
3. Close the memory card cover.

Ejecting a memory card

1. Open the memory card cover.
2. Slightly push the memory card inwards to pop it out.
3. Pull the memory card out of the slot and close the memory card cover.

Selecting a suitable memory card

- **You can use SD and MMC cards.**
 - RS MMC or Mini SD should be inserted by using an Adapter (not supplied).
- **On this DVD camcorder, you can use memory cards of the following capacity: Up to 2GB**
- For movie recording, use a memory card that supports faster write speed (at least 1.25 MB/s).



SD memory card

- SD memory cards have a mechanical write-protection switch. Setting the switch prevents accidental erasure of files recorded on the card. To enable writing, move the switch up in the direction of terminals. To set write protection, move the switch down.

MMC(Multi Media Card)

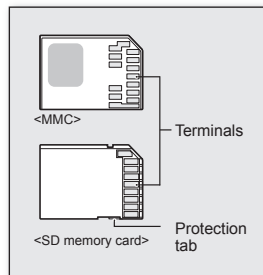
- MMC cards have no protection tab, so please use the protect function in the menu.
→page 60

Common cautions for memory card

- Damaged data may not be recovered. It is recommended you back-up important recordings separately on your PC's hard disk.
- Turning the power off or removing a memory card during operation such as formatting, deleting, recording, and playback may cause data loss.
- After you modify the name of a file or folder stored in the memory card using your PC, your camcorder may not recognize the modified file.

Handling a memory card

- It is recommended that you switch off before inserting or removing the memory card to avoid data loss.
- It is not guaranteed that you can use a memory card formatted by other devices. Be sure to format your memory card using this camcorder.
- Memory cards need to be formatted on this camcorder before use.
- If you cannot use a memory card that has been previously used with another device, format it on your DVD camcorder. Note that formatting erases all information on the memory card.
- A memory card has a certain life span. If you cannot record new data, you have to purchase a new memory card.
- Do not bend, drop, or cause a strong impact to your memory card.
- Do not use or store in a place that has a high temperature and humidity or a dusty environment.
- Do not place foreign substances on the memory card terminals. Use a soft dry cloth to clean the terminals if required.
- Do not put any additional labels on the memory card.
- Be careful to keep the memory card out of the reach of children who might swallow it.



digital camera mode (SC-DX103/DX105 only)

Note on use

- Samsung is not responsible for data loss due to misuse.
- We recommend using a memory card case to avoid losing data from moving and static electricity.
- After a period of use, the memory card may become warm. This is normal and is not a malfunction.
- Photo image files recorded on a memory card by your DVD camcorder conform to the "DCF (Design rule for Camera File system)" universal standard established by the JEITA (Japan Electronics and Information Technology Industries Association).
- DCF is an integrated image-file format for digital cameras: image files can be used on all digital devices conforming to DCF.

The DVD camcorder supports SD and MMC memory cards for data storage.

The data storage speed may differ, according to the manufacturer and production system.

- SLC (single-level cell) system: faster write speed is enabled.
- MLC (multi-level cell) system: only lower write speed is supported.

For best results, we recommend using a memory card that supports faster write speed.

Using a lower write speed memory card for recording a movie may cause difficulties with storing the movie on the memory card. You may even lose your movie data during the recording.

In an attempt to preserve any bit of the recorded movie, the DVD camcorder forcibly stores the movie on the memory card and displays a warning: "**Low speed card.**"

RECORDABLE TIME AND NUMBER OF IMAGES

Recordable time for movie images

Storage	Memory card				
Capacity	128MB	256MB	512MB	1GB	2GB
Movie image	Approx. 8 min	Approx. 16 min	Approx. 32 min	Approx. 64 min	Approx. 120 min

Recordable number of photo images

Storage	Memory card				
Capacity	128MB	256MB	512MB	1GB	2GB
Photo Quality	128MB	256MB	512MB	1GB	2GB
Super Fine	Approx. 600	Approx. 1200	Approx. 2400	Approx. 4830	Approx. 9740

Actual formatted capacity may be less as the internal firmware uses a portion of the memory.

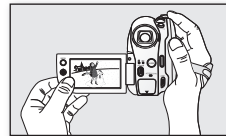
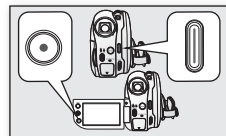
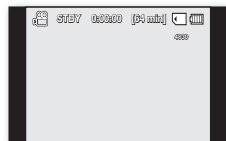


- The above figures are measured under Samsung's standard recording test conditions and may differ depending on actual use.
- The DVD camcorder provides only super fine for photo quality.
- The compression rate increases when choosing lower quality settings. The higher the compression rate is, the longer the recording time will be. However, the picture quality will be lower.
- Memory cards of bigger than 2GB in capacity may not work properly.
- Movie image files recorded on other equipment are not playable on this DVD camcorder.


digital camera mode (SC-DX103/DX105 only)

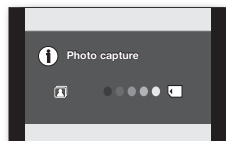
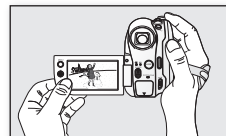
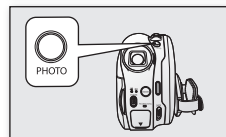
RECORDING MOVIE IMAGES ON A MEMORY CARD

- Set the **Storage mode** switch to **CARD** before recording on a memory card.
 - You can record movie images using the remote control. (SC-DX105 only) ➔page 13
 - This DVD camcorder provides two **Recording start/stop** buttons. One is on the rear side of the camcorder and the other is on the LCD panel. Select the **Recording start/stop** button that works best for you.
1. Turn the DVD camcorder on.
 - Connect a power source to the DVD camcorder.
(A battery pack or an AC power adaptor)
 - Slide the **POWER** switch downwards to turn the DVD camcorder on.
 - Set the **Storage mode** switch to **CARD**. ➔page 30
 2. Check the subject on the LCD screen. (Lens and LCD)
 - Set the **Lens open/close** switch to open (O). ➔page 10
 3. Press the **Recording start/stop** button.
 - The (●) recording indicator will display, and recording will start.
 - Press the **Recording start/stop** button again to stop recording.
 4. When recording is finished, turn the DVD camcorder off.
 - You can use the zoom function while recording. ➔page 37
 - For more details about recording, refer to page 63.
 - The movie images are recorded in the 4:3 aspect ratio on the memory card.
 - The recorded movie image size is 720X480.




TAKING PHOTO IMAGES

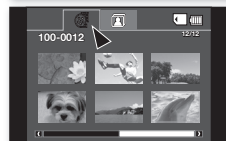
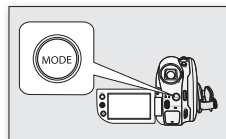
- Set the **Storage mode** switch to **CARD** before recording on a memory card.
 - You can take photo images using the remote control. ➡page 13 (SC-DX105 only)
1. Slide the **POWER** switch downwards to turn the DVD camcorder on.
 - Set the **Storage mode** switch to **CARD**. ➡page 30
 2. Check the subject on the LCD screen. (Lens and LCD)
 - Set the **Lens open/close** switch to open (O). ➡page 10
 3. Press the **PHOTO** button to take the picture.
 - A shutter sound is heard. The photo image is recorded with the “**Photo capture**” message appeared.
 - While saving the photo image on the memory cards, you cannot proceed with taking the next photo.
-  • You can use the zoom function while recording. ➡page 37
- The number of photo images that can be stored depends on the quality and size of the image. ➡page 55
 - The photo image is taken only in the 4:3 aspect ratio on the memory card.
 - Audio will not be recorded with the photo image on the memory card.
 - Please check the protection tab setting on your memory card before recording. You may not be able to record when it is locked.
 - If focusing is difficult, use the manual focus function. ➡page 70
 - Do not operate the **POWER** switch or remove the memory card while accessing the storage media. It may damage the storage media or data.
 - Photo images are actually wider than what appears on the LCD screen.
 - The recorded photo image size is 800X600.






digital camera mode (SC-DX103/DX105 only)

PLAYING MOVIE IMAGES

- This function works only in the Play mode. ➡ page 21
 - You can switch to the Play mode by pressing the **MODE** button.
 - You can find a desired movie image quickly using thumbnail index views.
 - Use the playback-related buttons on the remote control. ➡ page 13 (SC-DX105 only)
1. Slide the **POWER** switch downwards to turn on the power and open the LCD screen.
 - Set the **Storage mode** switch to **CARD**.
 - Adjust brightness or color of the LCD screen. ➡ page 79
 2. Press the **MODE** button to set the play mode.
 - The thumbnail index view appears. The thumbnail highlight is on the latest created or played file.
 - To change the current thumbnail page, move the **Joystick** down to highlight the page bar, then move the **Joystick** right or left to select the page.
 3. Use the **Joystick** to select the desired movie image, then press the **Joystick**.
 - The selected file fills the screen and is played automatically.
 - To stop playback, move the **Joystick** down.
 - Use the **Joystick** to enjoy various playback operations.
 - Press the **Joystick** to pause or play back.
 - Move the **Joystick** right or left to skip to the next or previous image.
 - Move the **Joystick** right or left and hold to fast forward or reverse playback(x2).
 4. To return to the thumbnail index view, move the **Joystick** down.
-  • You can control the volume by using the zoom lever during playback. ➡ page 39
- Slow playback is not available in the digital camera mode.
 - Press **Display** (I/O) button to toggle the OSD (On Screen Display) function on and off.
 - Depending on the amount of data to be played back, it may take some time for the playback images to appear.
 - Movies edited on a PC may not be displayed on this DVD camcorder.
 - Movies recorded on another camcorder may not be played on this DVD camcorder.

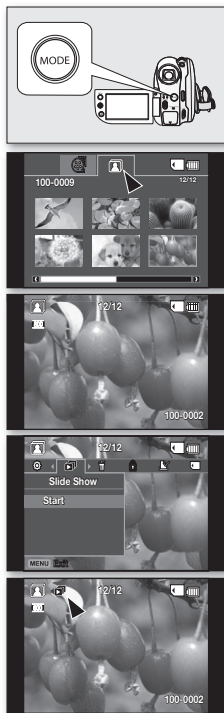


VIEWING PHOTO IMAGES

- This function works only in the Play mode. ➡ page 21
 - You can play back and view photo images recorded on the memory card.
1. Slide the **POWER** switch downwards to turn on the power and open the LCD screen.
 - Set the **Storage mode** switch to **CARD**. ➡ page 30
 - Adjust brightness or color of the LCD screen. ➡ page 79
 2. Press the **MODE** button. Use the **Joystick** to highlight the photo () tab.
 - The thumbnail index view of photo images appears.
 - To change the current thumbnail page, move the **Joystick** down to highlight the page bar, then move the **Joystick** right or left to select the page.
 3. Use the **Joystick** to select the desired photo image, then press the **Joystick**.
 - To view the previous image, move the **Joystick** left.
 - To view the next image, move the **Joystick** right.
 - To search for an image quickly, move the **Joystick** right or left and hold. During Search you will see image numbers change, but not the Photos.
 4. To return to the thumbnail index view, move the **Joystick** down.
 -  • All the icons disappear or appear when you press **Display** () button on the camcorder.
 - Loading time may vary depending on the image size.
 - Any large-sized image taken with another device will be displayed as a thumbnail image.

Set the slide show function for continuous display.

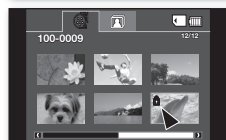
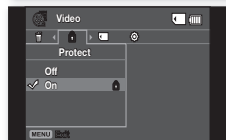
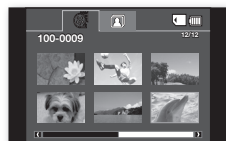
1. Press the **MENU** button in the single image display mode.
2. Move the **Joystick** right or left to select “**Slide Show**” → “**Start**” then press the **Joystick**.
 - The  indicator is displayed. The slide show will start from the current image.
 - All images will be played back consecutively for 2~3 seconds each.
 - To stop the slide show, move the **Joystick** down or press the **MENU** button.





digital camera mode (SC-DX103/DX105 only)

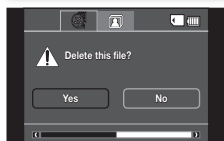
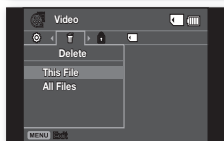
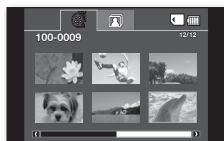
PROTECTION FROM ACCIDENTAL ERASURE

- This function works only in the Play mode. ➡page 21
 - You can protect important images from accidental erasure.
 - If you execute formatting, all files including protected files will be erased.
1. Slide the **POWER** switch downwards to turn on the power.
 - Set the **Storage mode** switch to **CARD**. ➡page 30
 2. Press the **MODE** button to set the Play mode.
 - The thumbnail index view appears.
 - To see the thumbnail index view of photo images, use the **Joystick** to select the photo (🖼️) tab.
 3. Use the **Joystick** to select the image to protect, press the **MENU** button.
 4. Move the **Joystick** right or left to select **"Protect."**
 5. Move the **Joystick** up or down to select the desired option (**"Off"** or **"On"**), then press the **Joystick**.
 - After completion, the selected images will be protected.
 - The (🔒) indicator appears on the selected image.
- 🖱️ • This function operates identically in the full image display mode (single image displayed on the screen). (Photo images only)
- Protected images will show the (🔒) indicator when they are displayed.
 - If the write-protection tab on the memory card is set to lock, you cannot set image protection. ➡page 53



DELETING IMAGES

- This function works only in the Play mode.
 - You can delete undesired movie images recorded on the memory card.
 - If you want to delete the protected images, you must first release the image protection.
 - An image that has been deleted cannot be recovered.
- Slide the **POWER** switch downwards to turn on the power.
 - Set the **Storage mode** switch to **CARD**. ➔page 30
 - Press the **MODE** button to set the Play mode.
 - The thumbnail index view of movie images appears.
 - To see the thumbnail index view of photo images, use the **Joystick** to select the photo() tab.
 - Use the **Joystick** to select the image to delete, then press the **MENU** button.
 - Move the **Joystick** right or left to select "**Delete**."
 - Move the **Joystick** up or down to select the desired option ("**This File**" or "**All Files**"), then press the **Joystick**.
 - "**This File**": Deletes the selected file.
 - "**All Files**": Deletes all images.
 - The message according to the selected option will appear. Move the **Joystick** right or left to select "**Yes**," then press the **Joystick**.
 - After completion, the selected images will be deleted.
-  This function operates identically in the full image display mode (single image displayed on the screen). (Photo images only)
- To protect important images from accidental deletion, activate the image protection. ➔page 60
 - You cannot delete a protected image. You must release the protect function to delete the image. ➔ page 60



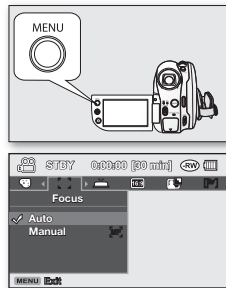
using the menu items

HANDLING MENUS

Follow the instruction below to use each of the menu items listed on this page.
For example: setting the Focus

Using the MENU button

1. Slide the **POWER** switch downwards to turn on the power.
 - Set the appropriate storage media. (SC-DX103/DX105 only) → page 30
2. Press the **MENU** button.
3. Move the **Joystick** right or left to select "**Focus.**"
4. Move the **Joystick** up or down to select the desired option, then press the **Joystick**.
 - Move the **Joystick** right or left to adjust focus manually.
5. To exit, press the **MENU** button.



Using the Joystick

The guide provides easier access to frequently used menus without using the **MENU** button.

1. Slide the **POWER** switch downwards to turn on the power.
2. Press the **Joystick** to display the guide.
3. Move the **Joystick** down to select focus (F).
4. Move the **Joystick** down to select the desired option.
 - Moving the **Joystick** down toggles between "**Auto Focus**" and "**Manual Focus.**"
5. To exit, press the **Joystick** repeatedly until the guide disappears.



- Accessible items in the menu vary depending on the operation mode.



MENU ITEMS

- Accessible items in menu vary depending on the operating mode.
- For operation details, see the corresponding page.

Recording menu items

Operating mode	DISC	CARD (SC-DX103/DX105 only)	Default value	Page
Scene Mode(AE)	●	X	Auto	65
White Balance	●	●	Auto	66
Exposure	●	●	Auto	67
Anti-Shake(DIS)	●	X	Off	68
Digital Effect	●	X	Off	69
Focus	●	●	Auto	70
Shutter	●	X	Auto	71
16:9 Wide	●	X	On	72
Quality	●	X	Fine	72
Wind Cut	●	X	Off	73
Back Light	●	●	Off	73
C. Nite	●	X	Off	74
Light (SC-DX105 only)	●	X	Off	74
Fader	●	X	Off	75
Guideline	●	●	Off	75
Digital Zoom	●	X	Off	76
File No.	X	●	Series	77
Disc Manage	●	X	-	47~51

● : possible, X : not possible



- Some items will not appear depending on the storage media type. (SC-DX103/DX105 only)
- There are some functions you cannot activate simultaneously in the menu. You cannot select the gray menu items. Refer to the Troubleshooting for examples of the inoperable combinations of functions and menu items. ➡page 111

using the menu items

Playback menu items

Operating mode	DISC	CARD (SC-DX103/ DX105 only)		Default value	Page
		Video	Photo		
Delete	●	●	●	-	40,61
Edit Partial Delete	●	X	X	-	41,46
Protect	X	●	●	-	60
Card Manage	X	●	●	-	78
Print Mark(DPOF)	X	X	●	-	83
Slide Show (in the single image display)	X	X	●	-	59

● : possible, X : not possible

Setting menu items






Operating mode	Default value	Page
Date/Time Set	JAN/01/2008 12:00 AM	78
Date/Time	Off	79
LCD Brightness	18	79
LCD Color	18	79
Beep Sound	On	80
Shutter Sound (SC-DX103/ DX105 only)	On	80
Auto Power Off	6 Min	80
Remote (SC-DX105 only)	On	81
TV Display	On	81
USB Connect DISC	PC Cam	81
(SC-DX103/ DX105 only) CARD	Mass Storage	
Default Set	-	81
Menu Color	Midnight Blue	81
Transparency	20%	82
Language	-	82
Demo	On	82

RECORDING MENU ITEMS

You can set up the menu items for recording.

Scene Mode(AE)

This DVD camcorder automatically sets the shutter speed and aperture according to the subject brightness for optimum recording. You can also specify one of six modes depending on conditions, recording environment or purpose of filming.

Settings	Contents	On-screen display
Auto	<ul style="list-style-type: none">- Auto balance between the subject and the background.- To be used in normal conditions.- The shutter speed is automatically adjusted depending on the scene.	None
Sports	<ul style="list-style-type: none">- For recording people or objects moving quickly. If the Sports mode is used under a fluorescent light, the image may flicker. In this case, use the Auto mode for recording.	
Portrait	<ul style="list-style-type: none">- Creates a shallow depth of field so that the person or subject appears against a softened background.- The portrait mode is most effective when used outdoors.	
Spotlight	<ul style="list-style-type: none">- Prevents overexposure of subject's face, etc., when strong light strikes the subject, as in a wedding or on stage.	
Beach/Snow	<ul style="list-style-type: none">- Prevents underexposure of subject's face, etc., in a place where reflection of light is intense, such as at the beach in midsummer or on a ski slope.	
High Speed	<ul style="list-style-type: none">- Reduces blurring when recording rapidly moving subjects such as in golf or tennis.	








- You can check the selected “**Scene Mode(AE)**” mode on the on-screen information display. However, nothing will appear in “**Auto**” mode.
- This function will be set to “**Auto**” in the EASY.Q mode.
- This function can be set in the DVD camcorder(disc) record mode only.


using the menu items

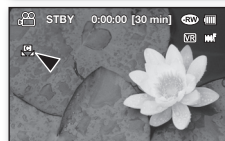
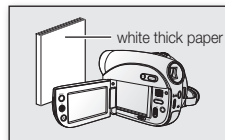
White Balance

This DVD camcorder automatically adjusts the color of subject. Change the white balance setting depending on the recording conditions.

Settings	Contents	On-screen display
Auto	This option is generally used to control the white balance automatically.	None
Daylight	This controls the white balance according to the outdoor ambience, especially for close up and when the subject is of one dominant color.	
Cloudy	This option is used when you make a recording in cloudy weather.	
Fluorescent	This option is used when you make a recording under white fluorescent lights.	
Tungsten	This option is for when there is less than 3200K of tungsten light being used.	
Custom WB	You can manually adjust white balance to match the light source or situation.	

Setting white balance manually

1. Move the **Joystick** up or down to select "**Custom WB**," then press the **Joystick**.
The "**Set White Balance**" indicator is displayed.
2. Frame a white object such as a piece of white paper so that it fills the screen.
Use an object that is not transparent.
 - If the object that fills the screen is not focused, correct the focus using "**Manual Focus**." → page 70
 - Press the **MENU** button to cancel.
3. Press the **Joystick**.
The white balance setting will be applied and () indicator is displayed.
To exit, press the **MENU** button.






- A subject can be shot under various types of lighting conditions indoors (natural, fluorescent, candlelight, etc.). Because the color temperature is different depending on the light source, the subject tint will differ depending on the white balance settings. Use this function for a more natural result.
- It is recommended that you specify "**Digital Zoom: Off**" (→page 76) before setting white balance.
- Do not use a colored object when setting white balance: The appropriate tint cannot be set.
- This function will be set to "**Auto**" in the EASY.Q mode.
- Reset the white balance if lighting conditions change.
- During normal outdoor recording, setting to auto may provide better results.


Exposure

The DVD camcorder usually adjusts the exposure automatically. You can also manually adjust the exposure depending on the recording conditions.

Settings	Contents	On-screen display
Auto	This option automatically adjusts image brightness according to the environmental light conditions.	None
Manual	You can adjust the brightness of an image manually. Adjust the brightness when the subject is too bright or too dark.	 XX

Setting the exposure manually:

When manually setting the exposure, the default setting appears as the value is automatically adjusted according to the environmental light conditions.

- Move the **Joystick** right or left to adjust the exposure while viewing the image on the LCD screen.
 - Exposure value can be set between "**0**" and "**29**."
- Press the **Joystick**.
 - The manual exposure setting will be applied and ( XX) indicator is displayed.
- To exit, press the **Joystick** repeatedly until the OK guide disappears.



using the menu items

Manual exposure is recommended in situations listed below:

- When shooting using reverse lighting or when the background is too bright.
- When shooting on a reflective natural background such as at the beach or when skiing.
- When the background is overly dark or the subject is bright.



- If you manually change the exposure value when “**Scene Mode(AE)**” function is selected, manual changes are applied first.
- This function will be set to “**Auto**” in the EASY.Q mode.

Anti-Shake(DIS)

When you use zoom to record a magnified subject image, it will correct fuzziness in the recorded image.











Settings	Contents	On-screen display
Off	Disables the function.	None
On	Compensates for unstable images caused by camcorder-shake, particularly at high magnification.	

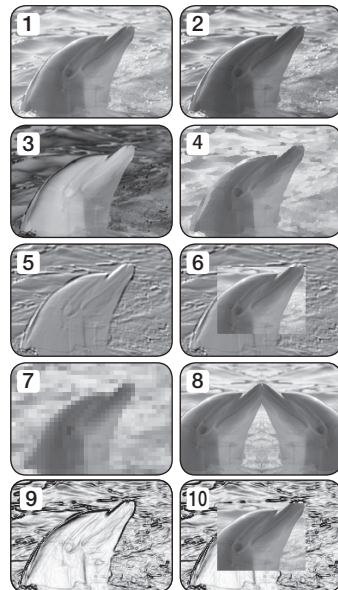


- EASY Q mode automatically sets the “**Anti-Shake(DIS)**” to “**On**.”
- When “**Anti-Shake(DIS): On**” is set, there will be a slight difference between the actual movement and the movement on screen.
- Gross camcorder-shake may not be entirely corrected even if “**Anti-Shake(DIS): On**” is set. Firmly hold the DVD camcorder with both hands.
- It is recommended that you specify “**Anti-Shake(DIS): Off**” when using the DVD camcorder on a desk or tripod (not supplied).
- When you record pictures with 34x or more magnification and the “**Anti-Shake(DIS)**” is set to “**On**” in dark locations, after-images may stand out. In this case, we recommend using a tripod (not supplied) and turning the “**Anti-Shake(DIS)**” to “**Off**.”
- This function can be set in the DVD camcorder(record mode only).

Digital Effect

The digital effect enables you to give a creative look to your recording. Select the appropriate digital effect for the type of picture that you wish to record and the effect you wish to create. There are 10 different digital effect options.

Settings	Contents	On-screen display
Off	Disables the function.	None
1 Black & White	This mode changes the images to black and white.	
2 Sepia	This mode gives the images a reddish brown pigment.	
3 Negative	This mode reverses the colors, creating a negative image.	
4 Art	This mode gives the images a coarse effect.	
5 Emboss1	This mode creates a 3D effect (embossing).	
6 Emboss2	This mode creates a 3D effect (embossing) on the surrounding area of an image.	
7 Mosaic	This mode gives the images a mosaic effect.	
8 Mirror	This mode cuts the picture in half, using a mirror effect.	
9 Pastel1	This mode applies a pale pastel drawing effect to an image.	
10 Pastel2	This mode applies a pale pastel drawing effect to the surrounding area of an image.	



- “Mirror” mode is not available in the 16:9 Wide mode. Release 16:9 wide first to set “Mirror.”
- This function will be set to “Off” while EASY.Q is in use.
- The “Emboss2,” “Mosaic,” “Pastel1,” “Mirror,” and “Pastel2” modes are not available while “Anti-Shake (DIS)” or “C. Nite” is in use.
- Digital Zoom is not available in the “Emboss2,” “Mosaic,” “Mirror,” “Pastel1,” or “Pastel2” mode.
- This function can be set in the DVD camcorder(disc) record mode only.

using the menu items

Focus

The DVD camcorder usually focuses on a subject automatically (auto focus). When the DVD camcorder is turned on, auto focus will always be set. You can also manually focus a subject depending on the recording conditions.

Settings	Contents	On-screen display
Auto	In most situations, it is better to use the automatic focus feature, as it enables you to concentrate on the creative side of your recording.	None
Manual	Manual focusing may be necessary under certain conditions that make automatic focusing difficult or unreliable.	[MF]

Focusing manually during recording

This DVD camcorder automatically focuses a subject from close-up to infinity. However, the correct focus may not be obtained depending on the recording condition. In this case, use the manual focus mode.

1. Move the **Joystick** up or down to select “Manual,” then press the **Joystick**.
 - The manual focus adjustment indicators appear.
2. Move the **Joystick** right or left to select the desired indicator to adjust focus, then press the **Joystick**.

Focusing on a farther subject

To focus on a farther subject, move the **Joystick** to the indicator (➡).

Focusing on a nearer subject

To focus on a nearer subject, move the **Joystick** to the indicator (⬅).

- The nearer or farther icon (⬅/➡) appears between the indicators when focus adjustment reaches the end. The adjusted value is applied right after moving the **Joystick** right or left to adjust the focus.
 - The manual focus setting will be applied and [MF] indicator is displayed.
3. To exit, press the **Joystick** repeatedly until the guide disappears.



<Nearer subject>



<Farther subject>

In the following situations, you may obtain better results by adjusting the focus manually.


- A picture containing several objects, some close to the DVD camcorder, others farther away.
- A person enveloped in fog or surrounded by snow.
- Very shiny or glossy surfaces like a car.
- People or objects moving constantly or quickly like an athlete or a crowd.



- “**Focus**” function will alternate between manual focus and auto focus. With auto focus, no indication will appear on the screen.
- If you are inexperienced in the use of DVD camcorders, we recommend that you use auto focus.
- This function will be set to “**Auto**” in the EASY.Q mode.


Shutter

The DVD camcorder automatically sets the shutter speed depending on the subject brightness. You can also manually adjust the shutter speed according to the scene conditions.

Settings	Contents	On-screen display
Auto	The DVD camcorder automatically sets the appropriate aperture value.	None
Manual	Shutter speed can be set to 1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, or 1/10000.	 1/XX

Setting the shutter speed manually

You can set the shutter speed manually. A fast shutter speed can freeze the motion of a fast-moving subject and a slow shutter speed can blur the subject to give the impression of motion. The adjusted value is applied right after moving the **Joystick** right or left to adjust the shutter speed.

1. Move the **Joystick** up or down to select “**Manual**,” then press the **Joystick**.
 - The manual shutter adjustment indicators appear.
2. Move the **Joystick** right or left to select the desired indicator to adjust shutter speed, then press the **Joystick**.
 - The adjusted value is applied right after moving the **Joystick** right or left to adjust the shutter speed.
 - The manual shutter setting will be applied and ( 1/XX) indicator is displayed.
3. To exit, press the **Joystick** repeatedly until the guide disappears.



Recommended shutter speed when recording

Shutter speed	Conditions
1/60	The shutter speed is fixed at 1/60 second. Color bands that appear when focusing on a TV screen become narrower.
1/100	The shutter speed is fixed at 1/100 second for indoor sports such as basketball. The flickering that occurs when shooting under a florescent light or mercury-vapor lamp is reduced.
1/250, 1/500, 1/1000	Moving cars, trains or other rapidly moving vehicles such as roller-coasters.
1/2000, 1/4000, 1/10000	Outdoor sports such as golf and tennis.

using the menu items



- We recommend using a tripod when recording with a slow shutter speed.
- If you manually change the shutter speed value when **"Scene Mode(AE)"** function is selected, manual changes are applied with priority.
- The image may not seem smooth when a high speed is set.
- This function will be set to **"Auto"** in the EASY.Q mode.
- When recording with a shutter speed of 1/1000 or higher, make sure the sun is not directly shining into the lens.
- The shutter speed can be set in the DVD camcorder record mode only.
- Fast shutter speed allows a fast-moving subject to be captured one frame at a time vividly.

16:9 Wide

You can record movie image in 16:9 or 4:3 according to the desired aspect ratio. Set the proper aspect ratio to match your TV. The 16:9 Wide function works in the DVD camcorder record mode only.

Settings	Contents	On-screen display
Off	Records images in full screen for playback on a 4:3 TV screen.	-
On	Records images in full screen for playback on a 16:9(wide) TV screen.	-



- Mirror mode and Digital Zoom are not available in the 16:9 Wide mode.
- A movie image is played in 16:9 aspect ratio in the DVD camcorder. When the movie image recorded in 4:3 aspect ratio is played in the DVD camcorder or 16:9 aspect ratio screen, the displayed picture may appear wider than the actual size.

Quality

You can select the quality of a movie to be recorded. This DVD camcorder can film in the SF (Super Fine), F (Fine) and N (Normal) modes. The Fine mode is set as the factory default.

Settings	Contents	On-screen display
Super Fine	Records movie images at the super-fine image quality.	
Fine	Records images at the fine image quality.	
Normal	Records images at the normal image quality.	




- Recorded files are encoded with Variable Bit Rate (VBR). VBR is an encoding system that automatically adjusts the bit rate according to the recording image.
- The quality can be set in the DVD camcorder record mode only.

Wind Cut

You can reduce wind noise when recording sound from the built-in microphone.

If **"Wind Cut"** is set to **"On,"** the low-frequency components in the sound picked up by the microphone will be cut off during recording; this makes it easier to hear voices and sound during playback.

- Use the Wind Cut when recording in windy places such as a beach.


Settings	Contents	On-screen display
Off	Disables the function.	None
On	Minimizes wind noise or other noise while recording.	



- Make sure the **"Wind Cut"** is set to **"Off"** when you want the microphone to be sensitive as possible.
- The Wind Cut function works only in the DVD camcorder(disc) record mode with the built-in microphone.

Back Light

When subject is lit from behind, this function will compensate for lighting so that the subject is not too dark.

Settings	Contents	On-screen display
Off	Disables the function.	None
On	<ul style="list-style-type: none">- Backlight compensation is executed.- Backlight compensation brightens the subject quickly.	

Back lighting influences recording when the subject is darker than the background:

- The subject is in front of a window.
- The person to be recorded is wearing white or shiny clothes and is placed against a bright background; the person's face is too dark to distinguish his/her features.
- The subject is outdoors and the background is overcast.
- The light sources are too bright.
- The subject is against a snowy background.



This function will be set to **"Off"** in the EASY.Q mode.



<Back Light off>



<Back Light on>

using the menu items

C. Nite

You can make the subject recorded appear to be in slow motion by controlling the shutter speed, or a brighter image in dark places without a compromise in colors.

Settings	Contents	On-screen display
Off	Disables the function.	None
1/30	Records a brighter image.	1/30
1/15	Records a brighter image even in a dark place.	1/15



- When using C.Nite, the focus adjusts slowly and white dots may appear on the screen, this is not a defect.
- C.Nite function is not available with the following functions: “Scene Mode(AE),” “Shutter,” “Exposure,” “Digital Zoom,” “Digital Effect” (“Emboss2,” “Mosaic,” “Mirror,” “Pastel1,” and “Pastel2”).
- If Anti-Shake(DIS) is set, C.Nite mode will be released.
- This function is available only in the DVD camcorder(disc) record mode.
- This function will be set to “Off” in the EASY.Q mode.

Light (SC-DX105 only)

You can record images brighter in a dark place.

Settings	Contents	On-screen display
Off	Records a image without using light.	None
On	Records a clear image in a dark place without sacrificing color with the light.	



CAUTION

- The LED light can become extremely hot. Do not touch it while in operation or soon after turning it off, otherwise serious injury may result.
- Do not place the DVD camcorder into the carrying case immediately after using the light, since it remains extremely hot for some time.
- Do not use near flammable or explosive materials.



- The light enables you to record a subject in dark places.
- The light will not turn on or off while you are recording.
- The range of the light is limited. (up to 6.6ft (2m))
- This function can be set only in the DVD camcorder(disc) record mode.
- This function will be set to “Off” in the EASY.Q mode.

Fader

You can give your recording a professional look by using special effects such as fade in at the beginning of a sequence or fade out at the end of a sequence.

Settings	Contents	On-screen display
Off	Disables the function.	None
On	Fader is executed.	

Fade in (approx. 3 seconds)



Fade out (approx. 3 seconds)

Fade in

Press the **Recording start/stop** button when “Fader” is set to “On.” Recording starts with a dark screen and then the image and sound are faded in (fade in).

Fade out

When you want to stop recording with fade out, set “Fader” to “On” again during recording. Then press the **Recording start/stop** button. Recording stops as the image and sound are faded out (fade out), image and sound are faded in (fade in).



- This function can be set only in the DVD camcorder record mode.
- This function will be set to “Off” in the EASY.Q mode.

Guideline

- Guideline displays certain patterns on the LCD screen so that you can easily set the image composition when recording movie or photo images.
- The DVD camcorder provides 3 types of guidelines.

Settings	Contents	On-screen display
Off	Disables the function.	None
Cross	Enables you to center the subject for proper recording.	
Grid	Enables you to place the subject in the center square for proper positioning.	
Safety Zone	Enables you to place the subject within a safety zone which prevents it being cut when editing in 4:3 for left and right and 2.35:1 for top and bottom.	

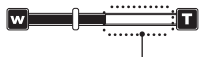


- Positioning the subject at the cross point of the guideline makes a balanced composition.
- Guidelines are not recorded on the images.

using the menu items

Digital Zoom

You can select the maximum zoom level in case you want to zoom to a level greater than 34x (the default setting) during recording. Zooming more than 34x is achieved digitally, up to 1200x when combined with optical zoom.



This right side of the bar shows the digital zooming factor. The zooming zone appears when you select the zooming level.

Settings	Contents	On-screen display
Off	Up to 34x zoom is performed optically.	None
100x, 200x, 400x, 1200x	Up to 34x zoom is performed optically, and after that, up to 100x (200x, 400x, or 1200x) is performed digitally.	None



- The image quality may deteriorate depending on how much you zoom in on the subject.
- Maximum zooming may result in lower image quality.
- Digital Zoom is not available while “Anti-Shake(DIS),” “EASY.Q,” “C. Nite,” “Digital Effect” (“Emboss2,” “Mosaic,” “Mirror,” “Pastel1,” and “Pastel2”) is in use.
- Once “Anti-Shake (DIS),” “C.Nite,” “EASY.Q,” “Digital Effect” (“Emboss2,” “Mosaic,” “Mirror,” “Pastel1,” and “Pastel2”) is selected, Digital Zoom mode will be released. (The Digital Zoom mode will be backed up when they are released. (“C. Nite,” “EASY Q” only))
- This function can be set only in the DVD camcorder(disc) record mode.

File No. (SC-DX103/DX105 only)

- File numbers are assigned to photo images in the order they were recorded.

Settings	Contents	On-screen display
Series	Assigns file numbers in sequence even if the memory card is replaced with another one or after formatting, or after deleting all files. The file number is reset when a new folder is created.	None
Reset	Resets the file number to 0001 even after formatting, deleting all or inserting a new memory card. Use “ Reset ” when the folder and files cannot be created anymore because the number of the folders and files reaches the limit.	None



- This function can be set only in the digital camera record mode.

using the menu items

PLAYBACK MENU ITEM

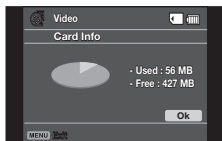
Card Manage (SC-DX103/DX105 only)

- You can manage a memory card for recording in the digital camera mode.

Settings	Contents	On-screen display
Format	Delete all files and options on the memory card including protected files.	None
Card Info	Shows the card information such as used space, free space.	None



- If you execute the format function, all files will be deleted completely and the erased files cannot be recovered.
- Do not turn the power off in the middle of formatting.
- A memory card with the protection tab set to lock will not be formatted. ➡ page 53
- Card information may appear depending on the card type.
- This function can be set only in the digital camera play mode.



SETTING MENU ITEMS

You can set up the date and time, OSD language and display settings of the DVD camcorder.

Date/Time Set

Set the current date and time so that they can be recorded correctly. ➡ page 29

Date/Time

You can set the date and time to display on the LCD screen.

- Before you use the “**Date/Time**” function, you must set the date and time. ➔page 29

Settings	Contents	On-screen display
Off	Current date and time information is not displayed.	None
Date	Displays the current date.	JAN/01/2008
Time	Displays the current time.	12:00 AM
Date&Time	Displays the current date and time.	JAN/01/2008 12:00 AM



- The date/time will read “JAN/01/2008 12:00 AM” in the following conditions.
 - If a movie or photo recording was made before setting the date/time in the DVD camcorder.
 - When the button type battery for internal clock becomes weak or dead.

LCD Brightness

You can adjust the brightness of the LCD screen to compensate for ambient lighting conditions. Moving the **Joystick** right will brighten the screen whereas moving it left will darken the screen.



- A brighter LCD screen setting consumes more battery power.
- You can adjust the LCD brightness from 0 to 35 when the ambient lighting is too bright and the monitor is hard to see.
- LCD Brightness does not affect the brightness of images to be stored.



LCD Color

You can adjust the LCD color from 0 to 35.

When you set color range, the higher the figure is, the brighter the LCD screen will be.



using the menu items

Beep Sound

You can turn the beep sound on or off.

Settings	Contents	On-screen display
Off	Cancels the beep sound.	None
On	When on, a beep will sound every time a button is pressed.	None



- The beep sound is off while recording movies.
- When beep sound is set to off, the power on/off sound is off.

Shutter Sound (SC-DX103/ DX105 only)

You can turn the shutter sound on or off.

Settings	Contents	On-screen display
Off	Cancels the shutter sound.	None
On	When on, the shutter will sound with each press of the PHOTO button.	None

Auto Power Off

You can set the DVD camcorder to turn off automatically when there is no operation for 6 minutes in the STBY mode and thumbnail index view.

Settings	Contents	On-screen display
Off	<ul style="list-style-type: none">- The DVD camcorder does not turn off automatically.- The DVD camcorder does not enter the sleep mode even if 3 minutes go by without any button pressed.	None
6 Min	<ul style="list-style-type: none">- The DVD camcorder enters the sleep mode if no operation is performed for 3 minutes in STBY or thumbnail index view. If no operation is made for 3 more minutes while the unit is in sleep mode, the camcorder turns off automatically. However, if any operation is made, the DVD camcorder comes out of the sleep mode.- The DVD camcorder does not turn off automatically during recording and playback.	None

Remote (SC-DX105 only)

This function allows you to enable or disable the remote control for use with the DVD camcorder.

Settings	Contents	On-screen display
Off	Disables the function. - The (OFF) indicator appears when you use the remote control.	None
On	You can control the DVD camcorder with the remote control.	None

TV Display

The TV Display function works in recording and play modes.

You can select the output path of the OSD (On Screen Display). This allows you to set the OSD for viewing on the viewfinder, LCD screen or an external TV.

Settings	Contents	On-screen display
Off	The OSD appears in the LCD screen and viewfinder only.	None
On	The OSD appears in the LCD screen, viewfinder and TV.	None

USB Connect (SC-DX103/DX105 only)

Using the USB cable, you can connect the DVD camcorder to a PC or a printer.

You can copy your movie and photo images from the memory card to a PC and print your photo images in the digital camera mode. You can use the DVD camcorder as PC cam in the DVD camcorder(disc) record mode.

Settings	Contents	On-screen display
Mass Storage	Connect to a PC to use the DVD camcorder as mass storage in the digital camera mode. (SC-DX103/DX105 only)	None
PictBridge	Connect to a printer. (SC-DX103/DX105 only)	None
PC Cam	Connect to a PC to use the DVD camcorder as PC cam in the DVD camcorder(disc) record mode.	None

Default Set

You can initialize the DVD camcorder settings to the factory defaults.

Initializing the DVD camcorder settings to the factory defaults does not affect recorded images.

Menu Color

You can select the desired menu color to display the menu.

“Midnight Blue” → “Lovely Pink” → “Mystic Purple” → “Sunny Orange” → “Oasis Green”

using the menu items

Transparency

You can select the desired transparency to display the menu.

“0%” → “20%” → “40%” → “60%”



- This function can be set only in the record mode.

Language

You can select a desired language to display the menu and messages.

“English” → “한국어” → “Français” → “Deutsch” → “Italiano” → “Español” → “Português” → “Nederlands” → “Svenska” → “Suomi” → “Norsk” → “Dansk” → “Polski” → “Česky” → “Slovensky” → “Magyar” → “Українська” → “Русский” → “中文” → “ไทย” → “Türkçe” → “فارسی” → “العربية” → “IsiZulu”



- “Language” options may be changed without prior notice.

Demo

Demonstration automatically shows you the major functions that are included with your DVD camcorder so that you may use them more easily.

Settings	Contents	On-screen display
Off	Disables the function.	None
On	Activates demonstration mode and shows various features.	None



- Demonstration starts in the following cases:
 - Right after “Demo” is set to “On.”
 - With “Auto Power Off” set to “Off,” if there is no operation for about 6 minutes in the STBY mode whether a disc is inserted or not.
 - Demonstration stops temporarily by pressing other buttons (MENU, Joystick, Recording start/stop, etc)
- Demo is dimmed in the setting menu while recording.
- In the digital camera(memory card) record mode, the demonstration will not take place even if it set to “On.” (SC-DX103/DX105 only)

printing photo images(SC-DX103/DX105 only)

You can print photo images by inserting the DPOF setting card(memory card) to the DPOF-compatible printer or connecting the DVD camcorder to the PictBridge printer.

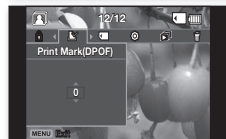
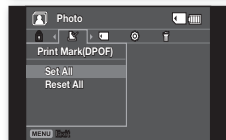
DPOF PRINT SETTING

- This function works only in the Play mode. ↪page 21
 - This DVD camcorder is compatible with DPOF (Digital Print Order Format). You can select which images to be printed and the number of prints with this DVD camcorder. This feature is useful to print with a DPOF-compatible printer or when bringing storage media to a photo lab for printing.
1. Slide the **POWER** switch downwards to turn on the power.
 - Set the **Storage mode** switch to **CARD**. ↪page 30
 2. Press the **MODE** button, then use the **Joystick** to select the photo (📷) tab to set the photo play mode.
 - The thumbnail index view of photo images appears.
 3. Press the **MENU** button.
 4. Move the **Joystick** right or left to select **"Print Mark (DPOF)."**
 5. Move the **Joystick** up or down to select the desired option (**"Set All"** or **"Reset All"**), then press the **Joystick**.
 - **"Set All"**: Print-marks all images.
You can print only one copy per one image by selecting **"Set All."**
 - **"Reset All"**: Removes the print mark.
 6. The message according to the selected option will appear. Move the **Joystick** right or left to select **"Yes,"** then press the **Joystick**.

You can set the number of prints in the single display view only. Press the **MENU** button then move the **Joystick** right or left to select **"Print Mark (DPOF)."** Move the **Joystick** up or down to select the number of prints. Up to 99 copies can be set to print of each image. To exit, press the **MENU** button.



- Print marked photo images will show the (📷) indicator when they are displayed.
- The **"Reset All"** option may take a long time depending on the number of stored images.
- DPOF (Digital Print Order Format) allows you to embed printing information on your recording medium's MISC folder. Select the pictures to be printed and how many prints to make.
- This function is not available for movie images.



printing photo images(SC-DX103/ DX105 only)

DIRECT PRINTING WITH A PICTBRIDGE

- If your printer is compatible with PictBridge, photo images can be printed easily by connecting the camcorder to the printer directly with the USB cable.
DPOF cannot be set while PictBridge is use. ↪page 83

NOTICE: After selecting “**PictBridge**” in the menu, connect the USB cable.

- Move to the photo play mode. ↪page 59
 - Set the **Storage mode** switch to **CARD**.
 - Press the **MODE** button and use the **Joystick** to select the photo (📷) tab to set the photo play mode.
- Set the “**USB Connect**” to “**PictBridge**.” ↪page 81
 - (Press the **MENU** button → Use the **Joystick** to select “**Setting**” → “**USB Connect**” → “**PictBridge**”)
- Connect your DVD camcorder to the printer using the provided USB cable.
- Turn your printer power on.
 - The PictBridge menu screen appears automatically after a short period.
 - To see the previous or next photo image, press the **MENU** button and move the **Joystick** left or right.
 - Each press of the **MENU** button toggles the PictBridge menu screen on or off.
- Press the **MENU** button. Move the **Joystick** right or left to select “**Print**,” and then press the **Joystick** to print.
 - The selected photo image will be printed.
 - To stop printing after printing starts, press the **MENU** button.

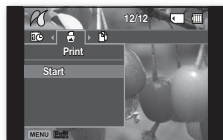
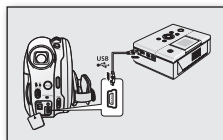
Setting the number of copies to print

Press the **MENU** button.

Move the **Joystick** right or left to select “**Copies**,” then move the **Joystick** up or down to select the number of copies.

To exit, press the **MENU** button.

- If the image moves to the previous or next, the number of copies is reset.



Setting the date/time imprint option

Move the **Joystick** right or left to select "**Date/Time**," then move the **Joystick** up or down to select the desired option. To exit, press the **MENU** button.

To print using the DPOF setting

If the printer is compatible with DPOF, you can use the DPOF setting. ➔ page 83



- If the printer is not recognized, or to print again after direct printing with a PictBridge printer, remove the USB cable, select "**PictBridge**" in the menu again, then reconnect the cable.
- If the "**USB Connect**" menu is set to "**Mass Storage**," you cannot connect a PictBridge compatible printer to the camcorder through USB cable. In some instances, the DVD camcorder may not connect to the printer, this will depend on the make of the printer. If connection fails, disconnect the USB cable and turn off the printer and back on. Then, connect the USB cable and set the DVD camcorder to "**PictBridge**."
- The date/time option may not be supported by all printers. Check with your printer manufacturer. The "**Date/Time**" menu cannot be set up if the printer does not support this option.
- PictBridge™ is a registered trademark of CIPA (Camera & Imaging Products Association), an image transfer standard developed by Canon, Fuji, HP, Olympus, Seiko Epson, and Sony.
- Use the USB cable provided with the DVD camcorder.
- Use the AC power adaptor for your DVD camcorder during PictBridge direct printing. Turning your DVD camcorder off during printing might damage data on the storage media.
- Movie images are not available for printing.
- You can set various printing options depending on the printer. Please refer to the user manual of the printer for details.
- Do not remove USB cable or memory card during printing.
- You may not print photo images recorded on other devices.



connecting to AV devices

You can view the recorded movie and photo images(SC-DX103/ DX105 only) on a large screen by connecting the DVD camcorder to a TV.

CONNECTING TO A TV

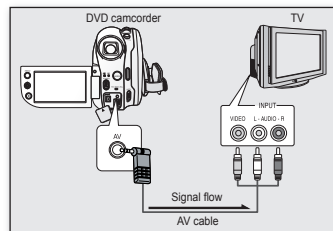
- To play back your recordings, the television must be NTSC compatible.
➡ page 102
- We recommend that you use the AC power adaptor as the power source for the DVD camcorder.

Use the provided AV cable to connect the DVD camcorder to a TV as follows:

1. Connect the end of the AV cable with the single plug to the AV jack of the DVD camcorder.
2. Connect the other end with video (yellow) and left(white)/ right(red) audio cables to the TV.



- For more information about the connection, refer to your TV's user manual.
- Before connecting, make sure that the volume on TV is turned down: forgetting this may cause feedback from the TV speakers.
- Carefully connect the input and output cables to the corresponding connections on the device the DVD camcorder is being used with.



Viewing on TV screen

1. Turn on the TV and set the input selector to the Input connection the DVD camcorder is connected to.
 - This is often referred to as "line." Refer to the TV instruction manual for how to switch the TV input.
2. Turn the DVD camcorder on.
 - Slide the **POWER** switch downwards, then open the LCD screen.
 - Set the appropriate storage media. (SC-DX103/DX105 only) ➡ page 30
 - Press the **MODE** button to set the Play mode. ➡ page 21
 - The image from the DVD camcorder will appear on the TV screen.
3. Perform playback.
 - You can perform playback, recording or make settings in the menu while viewing on your TV screen.










- Adjust the sound volume on TV.
- The remote control is useful when operating the DVD camcorder while viewing an image on TV screen. (SC-DX105 only)
- If only a mono audio input is available on the connected device (TV, etc.), use the audio cable with the white jack (Audio L).
- When a copy-protected movie is played back, no image will appear on TV screen.
- When **"TV Display"** is set to **"Off,"** OSD(On-Screen-Display) does not appear on the TV screen. ➔page 81
- Information that the DVD camcorder is recording will appear on the TV screen: Press the **Display** () button to switch the display status. ➔page 26
- Howling may occur when the DVD camcorder is too close to the other devices or the volume is high. Keep the DVD camcorder a reasonable distance away from the other connected devices.

Image display depending on TV screen ratio

Storage	Recording ratio	Wide (16:9) TV	4:3 TV
DISC	Movie images recorded in the 16:9 ratio (16:9 Wide: On)		
	Movie images recorded in the 4:3 ratio (16:9 Wide: Off)		
CARD (SC-DX103/ DX105 only)	<ul style="list-style-type: none"> • Movie images • Photo images 		

- Refer to page 72 for **"16:9 Wide"** setting.

connecting to AV devices

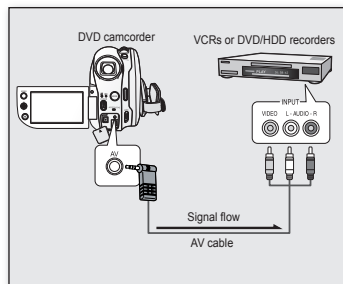
DUBBING IMAGES FROM THE CAMCORDER TO A VCR OR DVD/HDD RECORDER

You can dub images played back on this DVD camcorder onto other video devices, such as VCRs or DVD/HDD recorders. Use the provided AV cable to connect the DVD camcorder to another video device as shown in the following figure:

1. Slide the **POWER** switch downwards to turn the power on, then open the LCD screen. ➡ page 21
 - Set the appropriate storage media. (SC-DX103/DX105 only)
➡ page 30
2. Press the **MODE** button to set the Play mode.
3. Use the **Joystick** to select the recorded (dubbed) image in the thumbnail index view, then press the **Joystick**.
4. Press the record button on the connected device.
 - The DVD camcorder will start playback and the recording device will dub it.



- Refer to “Editing chapter” to create a playlist by selecting desired scenes from those recorded on this DVD camcorder. ➡ pages 40~46
- Audio is heard from the speaker. If the volume is too high, noise may enter the dubbed image.
- Be sure to use the AC power adaptor to power the DVD camcorder to prevent battery power from shutting off during recording on another video device.



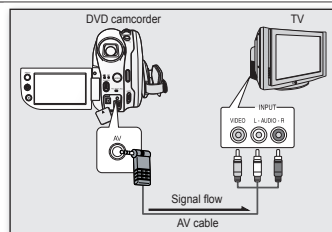
USING VOICE PLUS

- The Voice Plus function works only in the DVD camcorder play mode.
➔page 38
- This function enables you to narrate over a pre-recorded disc via the DVD camcorder's microphone.
- When you want to copy a DVD onto other AV devices (DVD recorder, VCR), you can dub your voice sound incoming from the internal microphone of your DVD camcorder to an AV device, instead of copying the audio signals on a pre-recorded disc.

1. Connect the DVD camcorder to your AV device with AV cable. ➔page 86
2. Set the **Storage mode** switch to **DISC**. (SC-DX103/DX105 only) ➔page 30
3. Insert the disc you wish to play back in this DVD camcorder.
4. Press the **MODE** button to set the Play mode.
5. Use the **Joystick** to select the desired image.
6. Press the **Recording start/stop** button on a point where you want during the playback.
 - Voice Plus icon (🗣️) is displayed and "Voice +" will blink for a while.
 - Sound signals incoming from the internal microphone will be dubbed to a connected AV device, instead of copying the pre-recorded sound on a disc.
7. To cancel, press the **Recording start/stop** button again.



- Voice Plus is available only when the AV cable is connected. If a USB cable is connected, the Voice Plus function may not operate properly.(SC-DX103/DX105 only)
- If you perform Stop, Play/Pause, REW, or FF while the Voice Plus function is being executed, the Voice Plus function will be deactivated.
- When the Voice Plus function is in progress, the **MENU** button or **PHOTO** button does not work.
- The Voice Plus function does not affect the original sound on the recorded disc.
- Sound is transferred from the internal microphone on this DVD camcorder to the connected AV device, when using the Voice Plus function. Make sure the microphone is not covered or blocked in any way.
- Adjust the sound volume on the connected external device. (TV, audio system etc.)
- Feedback may occur if the DVD camcorder is placed near the speaker of an external device.
- Turn down the volume of the external device and keep the DVD camcorder a reasonable distance away.



connecting to a PC(SC-DX103/DX105 only)

This chapter explains how to connect the camcorder to a PC using the USB cable for various functions.

★ When connecting a USB cable to a PC, refer to the software installation instructions and PC specifications below.

SYSTEM REQUIREMENTS

DV Media PRO

Following requirements must be satisfied to use DV Media PRO.

OS	Windows Vista(32bit, 64bit), XP, or 2000 *Standard installation is recommended. Operation may not be assured if the above OS has been upgrade.
CPU	Intel® Pentium® 4, 2 GHz recommended
RAM	512 MB (2 GB and above recommended)
Connector	USB1.1/2.0 connector
Display	1024 x 768, 24-bit color or higher
Miscellaneous	Internet Explorer 5.5 or later DirectX 9.0 or later



- USB port must be provided as standard USB 2.0 or USB 1.1. Hi-speed USB (USB 2.0) is recommended.
- USB interface is not supported on Macintosh operating systems.
- The above system requirements information is not a guarantee that the provided software will work on all personal computers meeting those requirements.
- On a slower PC than recommended, movie playback may not be smooth or video editing may take a long time.
- On a slower PC than recommended, movie playback may skip frames or operate unexpectedly.
- Intel® Pentium III™ or Pentium 4™ is a trademark of the Intel Corporation.
- Windows® is a registered trademark of the Microsoft® Corporation.
- All other brands and names are property of their respective owners.

INSTALLING DV Media PRO

When you install the DV Media PRO software on your Windows computer, you can enjoy the following operations by connecting your DVD camcorder to your computer via a USB cable.

- View Movie Recordings and Photos on PC: DV Driver, DirectX9.0, Video Codec
- PC cam/USB streaming function: DV Driver, DirectX9.0, Video Codec

Before your start!

- Turn on your PC. Exit all other running applications.
- Insert the provided CD into the CD-ROM drive.

The setup screen appears automatically soon after the CD is inserted. If the setup screen does not appear, click on "Start" on the bottom left corner and select "Run" to display a dialog. Type "D:\autorun.exe" and then press ENTER, if your CD-ROM drive is mapped to "D:Drive".

Installing Driver - DV Driver and DirectX 9.0

- DV Driver is a software driver that is required to support establishing connection to a PC.
(If it is not installed, some functions will not be supported.)
1. Click on "DV Driver" on the Setup screen.
 - Driver software is installed automatically. Following drivers will be installed:
 - PC Camera/USB Streaming driver(Capture Driver)
 2. Click on "Confirm" to finish driver installation.
 3. If the "DirectX 9.0" is not installed, it is installed automatically after setting <DV Driver>.
 - After installing "DirectX 9.0," please restart your PC.
If "DirectX 9.0" is installed already, there is no need to restart the PC.

Application Installation - Video Codec

- Click on "Video Codec" on the Setup screen.
"Video Codec" is required to play movie files recorded by this DVD Camcorder on a PC.

connecting to a PC(SC-DX103/DX105 only)

Application Installation – Quick Time

1. Click “Quick Time” on the Setup screen.

- QuickTime is Apple's technology for handling movie, sound, animation, graphics, text, music, and even 360-degree virtual reality (VR) scenes.



- Please install by using the Software CD that came with this DVD camcorder. We do not guarantee compatibility for different CD versions.
- For movie playback on a PC, install software in this order: **DV Driver, DirectX 9.0, Video Codec**
- For PC Cam use, install software in this order: **DV Driver, DirectX 9.0, Video Codec**
- You have to install **DV Driver, DirectX 9.0, Video Codec** to run DV Media Pro properly.
- If a message saying “Digital Signature not found” or something similar appears, ignore the message and continue with the installation.
- During installation, if the Microsoft LOGO test warning is shown, just click ‘Continue(C).’



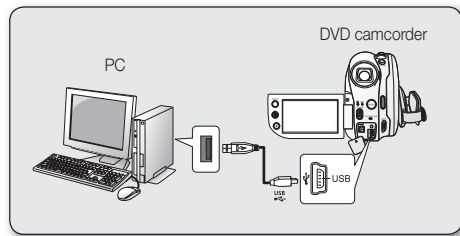
CONNECTING THE USB CABLE

To copy the movie files and photo files to your PC, connect your DVD camcorder to the PC with a USB cable.

1. Set the “**USB Connect**” to “**Mass Storage.**” ↪ page 81
2. Connect the DVD camcorder to the PC with a USB cable.



- Do not apply excessive force when inserting or extracting a USB cable into/from a USB jack.
- Insert a USB cable after checking the direction of its insertion is correct.
- Hi-speed USB (USB 2.0) recommended.



Disconnecting the USB cable

After completing the data transmission, you must disconnect the cable in the following way:

1. Click the “Unplug or eject hardware” icon on the task tray.
2. Select “USB Mass Storage Device” or “USB Disk”, then click “Stop.”
3. Click “OK.”
4. Disconnect the USB cable from the DVD camcorder and PC.



- We recommend using the AC power adaptor as the power supply instead of the battery pack.
- When the USB cable is connected, turning the camcorder on or off may cause the PC to malfunction.
- If you disconnect the USB cable from the PC or the DVD camcorder while transferring, the data transmission will stop and the data may be damaged.
- If you connect the USB cable to a PC via a USB HUB or simultaneously connect the USB cable along with other USB devices, the DVD camcorder may not work properly. If this occurs, remove all USB devices from the PC and reconnect the DVD camcorder.



connecting to a PC(SC-DX103/DX105 only)

VIEWING THE CONTENTS OF STORAGE MEDIA (MEMORY CARD)

- You can transfer or copy the files saved on the memory card onto the PC using a USB cable.
- Slide the **POWER** switch downwards to turn on the power, then set the **Storage mode** switch to **CARD**. ➔ pages 21, 30
 - Removable disk supports only the memory card. (DVD is not supported)
 - Connect the DVD camcorder to the PC with a USB cable. ➔ page 93
 - When using Windows® XP/Vista :**
 - The “Removable Disk” window appears on the PC screen after a moment.
 - Select “Open folders to view files using Windows Explorer” and click “OK.”

When using Windows® 2000:

- Double click the “My Computer” icon on the desktop.
The “Removable Disk” icon, which represents the storage media in the DVD camcorder, appears in the “My Computer” window.
 - Double click the “Removable Disk” icon.
- The folders in the storage media appear.
 - Different file types are stored in different folders.



- If the “Removable Disk” window does not appear, confirm the connection (page 93) or perform steps 1 and 2.
- If the “Removable Disk” window does not appear, click the “My Computer” icon to enter “Removable Disk.”
- In the digital camera mode, be sure that the memory card is inserted into the DVD camcorder before connecting USB cable. If no memory card or an unformatted memory card is inserted, the PC will not recognize your DVD camcorder as a removable disk.

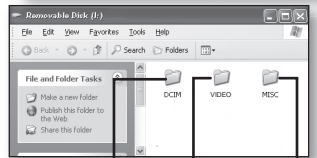
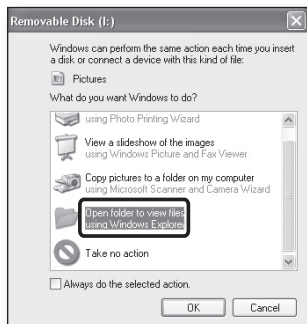


Photo images Movie images Setting data

Structure of folders and files on the storage media (Memory card)

- The folder and file structure for the memory card is as follows:
- Do not arbitrarily change or remove the folder or file name. It may not be playable.
- The file naming follows DCF (Design rule for Camera File System).

Image configuration file ①

This is where data for photo files such as DPOF are stored.

Movie image file ②

The movie images are formatted with a file name as follows: SMOV0001. The file number automatically increases when a new movie image file is created. When the number of files exceeds 99, a new folder is created and it is stored as 101SSMOV.

Photo image file ③

As in movie image files, the file number automatically increases when a new image file is created. When the number of photo images exceeds 99, a new folder is created. A new folder stores files from DCAM0001. The folder name increases in the order of 100SSDVC → 101SSDVC etc.

Image format

Movie image

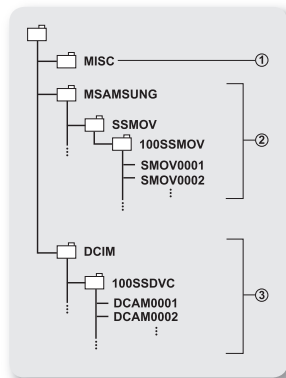
- Images are compressed in MPEG4 (Moving Picture Experts Group) format. The file extension is “.AVI.”
- The picture size is 720X480.

Photo image

- Photo images are compressed in JPEG (Joint Photographic Experts Group) format. The file extension is “.JPG.”
- The image size is 800x600.



- Up to 99 files are created in one folder. New folder is created when more than 99 files are created.
- You may modify the name of a file/folder stored in the memory card using a PC. This DVD camcorder may not recognize modified files.

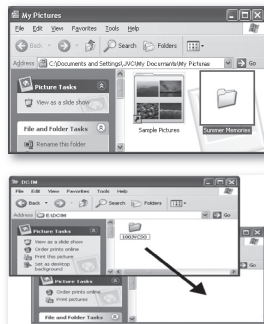


connecting to a PC(SC-DX103/DX105 only)

TRANSFERRING FILES FROM ON THE MEMORY CARD THE DVD CAMCORDER TO YOUR PC

You can copy the movie and photo images to your PC and play them back.

1. Execute the procedure in “Viewing the contents of storage media.” ➡ pages 94~95
 - The folders in the storage media appear.
2. Create a new folder, enter the folder name, then double click it.
3. Select the folder to copy, then drag and drop it into the destination folder.
 - The folder is copied from the memory card to the PC.
 - It is not guaranteed that the files downloaded to the PC will be played.



USING THE PC CAM FUNCTION

- This function works only in the DVD camcorder(disc) record mode. ➡page 21
 - To use the PC Cam function, the **DV Driver**, **Video Codec** and **DirectX 9.0** programs must be installed in the PC.
 - You can use this DVD camcorder as a PC camera.
 - When you connect to a Web site that provides video chatting functions, you can use your DVD camcorder for such functions.
 - When using this DVD camcorder for video conferencing (such as NetMeeting), voice communication may not be supported depending on the video conferencing software. In this case, connect an external microphone to the soundcard of the PC to enable voice communication.
 - Using the DVD camcorder with PC Net-meeting program installed, you can participate in a video conference.
 - The PC camera's screen size (Transferred video frame rate for the PC camera function is max 12.5 fps.)
 - 640X480(VGA) pixels for USB 2.0 connection.
 - If PC is connected to the DVD camcorder with a USB cable, only the **POWER** switch and **Zoom** lever can be operated.
 - Run a video chatting application such as Windows Messenger and enjoy the video utilization.
 - Various applications take advantage of the PC Cam function. Refer to respective product documentation for further details.
-
1. Set the **Storage mode** switch to **DISC**. (SC-DX103/DX105 only) ➡page 30
 2. Connect one end of the USB cable to the USB jack on the DVD camcorder and the other end to the USB connector on your computer.



maintenance & additional information

MAINTENANCE

Your DVD camcorder is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you fulfil any warranty obligations and allow you to enjoy this product for many years.

- For safekeeping of the DVD camcorder, turn off the DVD camcorder.
 - Remove the battery pack and AC power adaptor. ➔pages 16, 18
 - Remove the memory card and DVD disc. ➔pages 32, 52

Cautions when storing

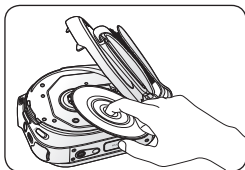
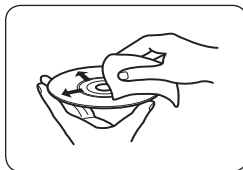
- **Do not leave the DVD camcorder in a place where the temperature is very high for a long period of time:**
The temperature inside a closed vehicle or trunk can become very high in a hot season. If you leave the DVD camcorder in such a place, it could malfunction or the case could be damaged. Do not expose the DVD camcorder to direct sunlight or place it near a heater.
- **Do not store the DVD camcorder in a place where the humidity is high or in a dusty place:**
Dust entering the DVD camcorder could cause malfunctions. If humidity is high, the lens could become mouldy, and the DVD camcorder could become inoperative. It is recommended that you put the DVD camcorder in a box together with a small silica bag when storing it in a closet, etc.
- **Do not store the DVD camcorder in a place subject to strong magnetism or intense vibration:**
This could cause malfunctions.
- **Detach the battery pack from the DVD camcorder and store it in a cool and dry place:**
Leaving the battery pack attached or storing it at high temperatures could shorten its life.

Cleaning the DVD camcorder

- **Before cleaning, turn off the DVD camcorder and remove the battery pack and AC power adaptor.**
To clean the exterior
Wipe gently with a soft dry cloth. Do not apply excessive force when cleaning, gently rub the surface.
 - Do not use benzene or a thinner to clean the camcorder. The coating of exterior could peel off or the case could deteriorate.**To clean the LCD screen**
Wipe gently with a soft dry cloth. Be careful not to damage the screen.
- **To clean the lens**
Use an optional air blower to blow out dirt and other small objects. Do not wipe the lens with cloth or your finger. If necessary, wipe gently with lens cleaning paper.
 - Mold may form if the lens is left dirty.
 - If the lens looks dimmer, turn off the DVD camcorder and leave it for about 1 hour.

Cleaning and handling the Disc

- Take care not to touch the recording side (the rainbow-colored side) of the disc with your fingers. Discs contaminated by fingerprints or foreign substances may not play properly.
- Use a soft cloth to clean the disc.
- Clean lightly from the center of a disc to the outside edge. Circling or cleaning too hard may create scratches on the disc and further cause the disc to play abnormally.
- Do not use benzene, thinner, detergent, alcohol or anti-static spray when cleaning the disc. It may cause a malfunction.
- Press the supporting holder in the center of the disc case for easy removal of the disc.
- Handle discs by the edges and the center hole to avoid fingerprints on the recording side.
- Do not bend or apply heat to the disc.
- Always store discs vertically in their plastic cases when not in use.
- Store discs away from direct sunlight, heating elements, moisture or dust.



ADDITIONAL INFORMATION

Storage media

- **Be sure to follow the guidelines below to prevent corruption or damage to your recorded data.**
 - Do not bend or drop the storage media, or subject it to strong pressure, jolts or vibrations.
 - Do not splash the storage media with water.
 - Do not use, replace, or store the storage media in locations that are exposed to strong static electricity or electrical noise.
 - Do not turn off the camcorder power or remove the battery or AC power adaptor during recording, playback, or when otherwise accessing the storage media.
 - Do not bring the storage media near objects that have a strong magnetic field or that emit strong electromagnetic waves.
 - Do not store the storage media in locations with high temperature or high humidity.
 - Do not touch the metal parts.
- **Copy the recorded files to your PC. Samsung shall not be responsible for any lost data.**
- **A malfunction may cause the storage media to fail to operate properly. Samsung will not provide any compensation for any lost contents.**
- **Refer to pages 30~32, 52~55 for details.**

maintenance & additional information

LCD screen

- **Do not leave the DVD camcorder in a place where the temperature is very high for a long period of time:**
- **To prevent damage to the LCD screen**
 - Do not push it too hard or knock it on anything.
 - Do not place the camcorder with LCD screen on the bottom.
- **To prolong service life,** avoid rubbing it with a coarse cloth.
- **Be aware of the following phenomena for LCD screen use. They are not malfunctions.**
 - While using the camcorder, the surface around the LCD screen may heat up.
 - If you leave power on for a long time, the surface around the LCD screen becomes hot.

Battery packs

When not using the DVD camcorder for an extended period:

It is recommended that you fully charge the battery pack once a year, attach it to the DVD camcorder and use it up; then remove the battery pack and store it in a cool and dry place again.

The supplied battery pack is a lithium-ion battery. Before using the supplied battery pack or an optional battery pack, be sure to read the following cautions:

- **To avoid hazards**
 - Do not burn.
 - Do not short-circuit the terminals. When transporting, carry the battery in a plastic bag.
 - Do not modify or disassemble.
 - Do not expose the battery to temperatures exceeding 60°C (140°F), as this may cause the battery to overheat, explode or catch fire.
- **To prevent damage and prolong service life**
 - Do not subject to unnecessary shock.
 - Charge in an environment where temperatures are within the tolerances shown as below.
This is a chemical reaction-type battery - cooler temperatures impede chemical reaction, while warmer temperatures can prevent complete charging.
 - Store in a cool, dry place. Extended exposure to high temperatures will increase natural discharge and shorten service life.
 - Remove from charger or powered unit when not in use, as some machines use electric current even when switched off.



- It is recommended that only genuine **Samsung** batteries are used in this camcorder. Using generic non-**Samsung** batteries can cause damage to the internal charging circuitry.
- It is normal for the battery pack to be warm after charging, or after use.

Temperature range specifications

Charging: 10°C to 35°C (50°F to 95°F), Operation: 0°C to 40°C (32°F to 104°F), Storage: -20°C to 50°C (-4°F to 122°F)

- The lower the temperature, the longer recharging takes.
- **Refer to pages 16~19 for details.**

Disc-type description

Disc Type	DVD-R (3 1/2")	DVD+R DL (3 1/2")	DVD-RW (3 1/2")		DVD+RW (3 1/2")
Mode	–	–	VR (Video Recording)	Video	–
Capacity	1.4G	2.6G	1.4G	1.4G	1.4G
Formatting a new disc ① → page 31	Auto	Auto	● ②		● ③
Recording → pages 33~37	●	●	●	●	●
Deleting → page 40	X	X	●	X	X
Rewrite	X	X	●	●	●
Playback on other DVD players ④ (Finalize⑤) → page 48	●	●	X	●	● ⑥
Playback on other DVD recorders ④ → page 48	●	●	●	●	● ⑥
Additional recording after finalization (Unfinalize) → page 49	X	X	●	●	– ⑥
Editing → page 40-46	X	X	●	X	X
Reusing a disc by formatting ⑦ (Format) → page 50	X	X	●	●	●

● : possible, X : not possible, – : not needed

- ① You must format a new disc before recording on it.
- ② When loading a DVD-RW disc, you must format it in Video or VR mode.
- ③ When loading a DVD+RW disc, you must format it.
- ④ We cannot guarantee that you will be able to play back in all other manufacturer's DVD camcorders, DVD players/recorders, or PC's. For compatibility information, please refer to the manual of the device you wish to play back on.
- ⑤ Discs must be finalized before it can be played on standard DVD players/recorders.
Refer to page 8 for finalized disc compatibility.
- ⑥ You can play back DVD+RW discs on DVD players/recorders without finalizing them.
- ⑦ When formatting a recorded disc, the data recorded on the disc is deleted and disc capacity is restored, enabling you to re-use the disc.

maintenance & additional information

USING YOUR DVD CAMCORDER ABROAD

- **Each country or region has its own electric and color systems.**
- **Before using your DVD camcorder abroad, check the following items.**
- Power sources

The provided AC power adaptor features automatic voltage selection in the AC range from 100 V to 240 V. You can use your camcorder in any countries/regions using the AC power adaptor supplied with your camcorder within the AC 100 V to 240 V, 50/60 Hz range. Use a commercially available AC plug adaptor, if necessary, depending on the design of the wall outlet.

- On TV color systems

Your camcorder is an **NTSC**-system-based camcorder.

If you want to view your recordings on a TV or to copy it to an external device, it must be an **NTSC**-system-based TV or an external device and have the appropriate Audio/Video jacks. Otherwise, you may need to use a separate video format transcoder (NTSC-PAL format converter).

- **NTSC-compatible countries/regions**

Bahamas, Canada, Central America, Japan, Korea, Mexico, Philippines, Taiwan, United States of America, etc.

- **PAL-compatible countries/regions**

Australia, Austria, Belgium, Bulgaria, China, CIS, Czech Republic, Denmark, Egypt, Finland, France, Germany, Greece, Great Britain, Netherlands, Hong Kong, Hungary, India, Iran, Iraq, Kuwait, Libya, Malaysia, Mauritius, Norway, Romania, Saudi Arabia, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Syria, Thailand, Tunisia, etc.



troubleshooting

TROUBLESHOOTING








Before contacting a Samsung authorized service center, perform the following simple checks. They may save you the time and expense of an unnecessary call.

Warning indicators and messages

Overall

Message	Icon	Informs that...	Action
Low Battery		The battery pack is almost discharged.	Replace with a charged battery or connect the AC power adaptor. (If the AC power adaptor is connected when "Low Battery" is displayed, the power is turned off and the charging starts.)
Cover is opened		Cover is opened.	Close the cover.








Discs

Message	Icon	Informs that...	Action
Insert Disc		There is no disc in DVD camcorder.	Insert a disc.
Disc Full		There is not enough disc space.	Change to a new disc. Erase recorded image.
Finalized Disc		The disc is finalized.	To record on a DVD-RW/+RW disc, unfinalize it.
Not Supported Disc		The disc is not recognized in the DVD camcorder. The disc has been finalized in a camcorder manufactured by another company.	The supported discs are DVD-R, DVD+R DL, DVD-RW and DVD+RW. Use a new disc.
Disc Error		File system does not match to the disc. Disc is formatted in the PC.	Reformat the disc for -RW/+RW. There should be no scratches on the surface of the disc.
Write Error	 	Your disc or memory card has some problems in writing data. Disc is shocked while movies is being recorded onto the disc.	To recover previous data in your disc or memory card, turn the power off and on. After recovering data, the system will be switched to STBY mode. If it fails to recover data, " Disc Error " or " Card Error " appear.

troubleshooting

Message	Icon	Informs that...	Action
Recovering Data... Don't power off		While recording, if the power is suddenly turned off, file writing is not properly done. When you turn on the power, you will see the message, "Recovering Data... Don't power off."	<p>If the DVD camcorder is turned off while recording, turn it on again with the disc or memory card inserted in it: Repair of the disc or memory card will be executed automatically.</p> <p>Do not turn the DVD camcorder off when data recovery is in progress. Do the following so as not to damage the data or the storage media (disc or memory card) itself:</p> <ul style="list-style-type: none"> - Connect the AC power adaptor - Do not remove the disc or memory card - Do not remove the battery pack - Do not subject the DVD camcorder to severe vibrations or impact. <p>The data recovery completes within a few minutes but sometimes it may take more time.</p> <ul style="list-style-type: none"> - The data recovery may not be successful depending on if there is a power interruption or recordings from other DVD camcorders or recorders are present on the storage media.

Memory cards (SC-DX103/ DX105 only)

Message	Icon	Informs that...	Action
Insert Card		There is no memory card inserted in the card slot.	Insert a memory card. Use another storage media. ➡ pages 30
Card Full		There is not enough space to record in the memory card.	Delete unnecessary files on the memory card. Use another storage media. ➡ page 30
Not Supported Card		The memory card is not supported in this camcorder.	Change the memory card that we recommended. ➡ pages 52~53
Card Error		The memory card or the controller are corrupted.	The memory card could be damaged. Try with another memory card.
Low speed card		The DVD camcorder cannot record with a low speed card.	Use the recommended memory card. ➡ pages 52~53
Not formatted!		File system does not match the memory card. Memory card is formatted in the PC. The memory card needs to be formatted.	Format the memory card. ➡ page 78
Card Locked		The memory card is record protected.	Release the write-protect tab on the memory card.

PictBridge (SC-DX103/DX105 only)

Message	Informs that...	Action
Read Error	There are some problems with file.	Release the protection.
Ink Error	There are some problems with the ink cartridge.	<ul style="list-style-type: none">• Check the ink cartridge.• Replace the ink cartridge.
Paper Error	There are some problems with the paper.	Check the paper in the printer. If there is no paper, inset the paper.
Print Error	There are some problems with the printer.	Turn the printer power off and on.

Refer also to the user manual for the printer to be used.



When there is dew condensation, put the camcorder aside for a while before using.

- What is dew condensation?

Dew condensation happens when a DVD camcorder is moved to a place where there is a significant temperature difference from the previous place. The dew condenses on the external or internal lenses of the DVD camcorder and on the reflection lens and the surface of the disc which are related to playback. When this happens, you temporarily may not use the record or play functions of the DVD camcorder. Also, using the camcorder while there is condensation may cause malfunction or damage.

- What can I do?

Turn the power off and detach the battery pack, and leave it in a dry area for 1~2 hours before using it.

- When does the dew condensation occur?

When the device is relocated to a place with a higher temperature than the previous location, or when using it in a hot area suddenly, it will cause condensation.

- When recording outside in cold weather during the winter and then using it in indoors.
- When recording outside in hot weather after being indoors or inside a car where the AC was running.

Note before sending your camcorder for repair.

- If these instructions do not solve your problem, contact your nearest Samsung authorized service center.
- Depending on the problem, the internal memory may need to be initialised or replaced and the data will be deleted.

Be sure to back up the data on your PC before sending your camcorder to repair.

Samsung cannot guarantee any loss of your data.

troubleshooting

- ✱ If you encounter any problem using your camcorder, check the following before requesting service.
If these instructions do not solve your problem, contact Samsung customer service at 1-800-SAMSUNG.

Symptoms and solutions

Power

Symptom	Explanation/Solution
The power turns off automatically.	<ul style="list-style-type: none">Is "Auto Power Off" set to "6Min"? If no button is pressed for about 6 minutes in STBY mode, the DVD camcorder is automatically turned off. To disable this option, Set "Auto Power Off" to "Off." ➔ page 80The battery pack is almost exhausted. Charge the battery pack or replace it with a charged one. Use the AC power adaptor.
Power cannot be turned off.	<ul style="list-style-type: none">Remove the battery pack or unplug AC power adaptor, and connect the power supply to the camcorder again before turning it on.
The battery pack is quickly discharged.	<ul style="list-style-type: none">The ambient temperature is too low.The battery pack is not fully charged. Charge the battery pack again.The battery pack reached its lifespan and cannot be recharged. Use another battery pack.

Displays

Symptom	Explanation/Solution
The LCD is turned off.	<ul style="list-style-type: none">Keep away from magnetic materials. When magnetic material is near the left side of the DVD camcorder, the LCD may be turned off but it is not a malfunction.
The image in the Viewfinder is blurred.	<ul style="list-style-type: none">The Viewfinder lens has not been adjusted.Adjust the Viewfinder control lever until the indicators displayed on the Viewfinder come into sharp focus.
The screen of TV or LCD displays distorted images or has black bars at the top/ bottom or utmost left/right	<ul style="list-style-type: none">It can occur when recording or viewing a 16:9-ratio image on a 4:3-ratio TV, or vice versa. For more details, see the display specification.
Unknown indicator appears on the LCD screen.	<ul style="list-style-type: none">A warning indicator or message appears on the screen. ➔ pages 103-104
An afterimage remains on the LCD screen.	<ul style="list-style-type: none">This occurs if you disconnect the AC power adaptor or remove the battery pack before turning the power off.
The LCD screen is black with indicators appeared only.	<ul style="list-style-type: none">Check the lens cover. Open the lens cover if closed.

Discs

Symptom	Explanation/Solution
The disc cannot be removed.	<ul style="list-style-type: none"> Your camcorder is damp and moist inside (condensation). Or the internal temperature of your camcorder is unusually high. Turn off your camcorder and leave it for about 1 hour in a cool and dry place. ➡ page 105 Finalizing is interrupted by turning off your camcorder. Turn on your camcorder and remove the disc only when the finalization is completed. ➡ pages 47-48
Disc is not recognized and the disc cover opens.	<ul style="list-style-type: none"> The disc is damaged. Replace with a new disc.

Memory cards (SC-DX103/ DX105 only)

Symptom	Explanation/Solution
Digital camera modes are not operable.	<ul style="list-style-type: none"> Insert a memory card into your camcorder properly. ➡ page 52 If you use a memory card formatted on a computer, format it again directly on your camcorder. ➡ page 78
Image cannot be deleted.	<ul style="list-style-type: none"> Release the lock on the write-protect tab of the memory card (SD card), if any. ➡ page 53 You cannot delete images protected by another device. Release the protection of the image on the device.
You cannot format the memory card.	<ul style="list-style-type: none"> Release the lock on the write-protect tab of the memory card (SD card), if any. ➡ page 53 The memory card is not supported on your camcorder or card has some problems.
The data file name is not indicated correctly.	<ul style="list-style-type: none"> The file may be corrupted. The file format is not supported by your DVD camcorder. Only the file name is displayed if the directory structure complies with the international standard.

Recording

Symptom	Explanation/Solution
Pressing the Recording start/stop button does not start recording.	<ul style="list-style-type: none"> Press the MODE button to set the STBY mode. (⏻). There is not enough free space to record on the storage media. Check if memory card is not inserted or write-protect tab is set to lock. (SC-DX103/ DX105 only) ➡ page 53 Your camcorder is damp and moist inside (condensation). Turn off your camcorder and leave it for about 1 hour in a cool, dry place. ➡ page 105

troubleshooting

Symptom	Explanation/Solution
The actual recording time is less than the estimated recording time.	<ul style="list-style-type: none"> The estimated recording time is calculated by some references. When you record an object that moves fast, the actual recording time may be shortened.
The recording stops automatically.	<ul style="list-style-type: none"> The internal temperature of your camcorder is extremely low. Keep it turned on and wait until it warms up. If you make a frequent recording or deletion of files, the performance of the storage media will deteriorate. In this case, format the storage media again. If you use the memory card with low writing speed, the DVD camcorder automatically stops recording the movie images then the corresponding message appears on the LCD screen.
When recording a subject illuminated by bright light, vertical line appears.	<ul style="list-style-type: none"> This is not a malfunction.
When the screen is exposed to direct sunlight during recording, the screen becomes red or black for an instant.	<ul style="list-style-type: none"> This is not a malfunction.
During recording, the date/time does not display.	<ul style="list-style-type: none"> "Date/Time" is set to "Off." Set the "Date/Time" to on. ➡ page 29
You cannot record a photo image. (SC-DX103/DX105 only)	<ul style="list-style-type: none"> Set your camcorder to the digital camera (memory card) record mode. ➡ page 30 Release the lock on the write-protection tab of the memory card if any. The memory card is full. Use a new memory card or format the memory card. ➡ pages 52-54 Or remove unnecessary images. ➡ page 61 You cannot take photo images on a disc. Set the Storage mode switch to CARD.
There is a time difference between the point where you press Recording start/stop button and the point where the recorded movie starts/stops.	<ul style="list-style-type: none"> On your camcorder, there may be a slight time delay between the point when you press Recording start/stop button and the actual point where the recorded movie starts/stops. This is not an error.
The aspect ratio (16:9/4:3) of a movie cannot be changed.	<ul style="list-style-type: none"> The aspect ratio of a movie at 16:9 cannot be changed to 4:3.

Adjusting the image during recording

Symptom	Explanation/Solution
Focus does not adjust automatically.	<ul style="list-style-type: none"> Set "Focus" to "Auto." ↪page 70 The recording conditions are not suitable for auto focus. Adjust the focus manually. ↪page 70 The lens is dusty on the surface. Clear the lens and check the focus.
The image appears too bright or flickering, or changes in color.	<ul style="list-style-type: none"> This may occur when you make a recording under a fluorescent, sodium or mercury lamp. Cancel "Scene Mode (AE)" to avoid or minimize the phenomena. ↪page 65
Image's color balance is not natural.	<ul style="list-style-type: none"> White balance adjustment is required. Adjust to the proper "White Balance." ↪page 66

Playback on your DVD camcorder

Symptom	Explanation/Solution
Using the playback (Play/Pause) function does not start playing.	<ul style="list-style-type: none"> Press the MODE button to set to the Play mode. Images recorded using another device may not be played on your DVD camcorder. Select a proper storage media. (SC-DX103/ DX105 only) ↪page 30 Check out the memory card compatibility. ↪page 52~54
The Skip or Search function does not work properly.	<ul style="list-style-type: none"> If the temperature inside the camcorder is too high, it may not function properly. Turn the camcorder off, and turn it on again a little later.

Connecting/Dubbing with other devices (TV, DVD players, etc)

Symptom	Explanation/Solution
You cannot view the image or hear the sound from the connected device.	<ul style="list-style-type: none"> Connect the audio of the audio/video cable to your camcorder or to the connected device (TV, DVD recorder, etc). (Red color- right, White color- left) The connection cable (AV cable) is not connected properly. Make sure that the connection cable is connected to the proper jack. ↪pages 86~87
The image appears distorted on a 4:3 TV.	<ul style="list-style-type: none"> This happens when viewing an image recorded in 16:9 wide mode on a 4:3 TV. If you want to display properly on your TV, check out your TV type and set the proper screen mode ("16:9 Wide") before recording. ↪page 72
You cannot dub correctly using the AV cable.	<ul style="list-style-type: none"> The AV cable is not connected properly. Make sure that the AV cable is connected to the proper jack, i.e. to the input jack of the device used for dubbing images from your camcorder. ↪page 88

troubleshooting

Connecting to a computer

Symptom	Explanation/Solution
The computer does not recognize your camcorder.	<ul style="list-style-type: none">• Disconnect any other USB device than the keyboard, mouse and camcorder from the computer.• Disconnect the USB cable from the computer and camcorder, restart the computer, then connect it again correctly.• You can not use the camcorder in DVD camcorder mode with a Macintosh.
Cannot play a movie file properly on a PC.	<ul style="list-style-type: none">• Make sure you insert the connector in the correct direction, and connect the USB cable to the USB jack on your camcorder firmly.• Disconnect the cable from the computer and camcorder, restart the computer. Connect it again properly.
The image or sound on your camcorder is not played on your computer properly.	<ul style="list-style-type: none">• Movie playback or sound may stop temporarily depending on your computer. The movie or sound copied to your computer is not affected.• If your camcorder is connected to a computer that does not support hi-speed USB(USB2.0), the image or sound may not be played correctly. The image and sound copied to your computer are not affected.
The playback screen is paused or distorted.	<ul style="list-style-type: none">• Check the system requirements to play a movie. ➡page 90• Exit other all applications running on the current computer.• If a recorded movie is played on your camcorder connected to a computer, the image may not play smoothly, depending on the transfer speed. Please copy the file to your PC, then play it back.

Overall operations

Symptom	Explanation/Solution
The date and time are incorrect.	<ul style="list-style-type: none"> Has the camcorder been left unused for a long period of time? The backup memory battery(button type battery) may be discharged. Replace with a new battery. ➔page 14

Menu

Symptom	Explanation/Solution																
Menu items are greyed out.	<ul style="list-style-type: none">• You cannot select greyed items in the current recording/playback mode.• There are some functions you cannot activate simultaneously. The following list shows examples of unworkable combinations of functions and menu items.• Menu cannot be used in the EASY.Q mode.• The following menu cannot be used during recording; “Anti-Shake(DIS),” “16:9 Wide,” “Quality,” “Wind Cut,” “Digital Zoom,” “Disc Manage”																
	<table><tr><th>Cannot Use</th><th>Because of the following setting</th></tr><tr><td rowspan="3">Scene Mode (AE)</td><td>Exposure (Manual)</td></tr><tr><td>Shutter (Manual)</td></tr><tr><td>C. Nite</td></tr><tr><td>Digital Effect: Mosaic/ Emboss2/Pastel1/ Pastel2</td><td>Anti-Shake(DIS)</td></tr><tr><td></td><td>C. Nite</td></tr><tr><td>Digital Effect: Mirror</td><td>16:9 Wide</td></tr><tr><td></td><td>Anti-Shake(DIS)</td></tr><tr><td></td><td>C. Nite</td></tr></table>	Cannot Use	Because of the following setting	Scene Mode (AE)	Exposure (Manual)	Shutter (Manual)	C. Nite	Digital Effect: Mosaic/ Emboss2/Pastel1/ Pastel2	Anti-Shake(DIS)		C. Nite	Digital Effect: Mirror	16:9 Wide		Anti-Shake(DIS)		C. Nite
	Cannot Use	Because of the following setting															
	Scene Mode (AE)	Exposure (Manual)															
		Shutter (Manual)															
		C. Nite															
	Digital Effect: Mosaic/ Emboss2/Pastel1/ Pastel2	Anti-Shake(DIS)															
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	C. Nite																
<table><tr><th>Cannot Use</th><th>Because of the following setting</th></tr><tr><td rowspan="3">Digital Zoom</td><td>Digital Effect: Mosaic/ Emboss2/Pastel1/ Pastel2/Mirror</td></tr><tr><td>Anti-Shake(DIS)</td></tr><tr><td>C. Nite</td></tr><tr><td>Shutter (Manual)</td><td>C. Nite</td></tr><tr><td>Exposure (Manual)</td><td>C. Nite</td></tr><tr><td>C. Nite</td><td>Anti-Shake(DIS)</td></tr></table>	Cannot Use	Because of the following setting	Digital Zoom	Digital Effect: Mosaic/ Emboss2/Pastel1/ Pastel2/Mirror	Anti-Shake(DIS)	C. Nite	Shutter (Manual)	C. Nite	Exposure (Manual)	C. Nite	C. Nite	Anti-Shake(DIS)					
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	C. Nite																
Shutter (Manual)	C. Nite																
Exposure (Manual)	C. Nite																
C. Nite	Anti-Shake(DIS)																

specifications

MODEL NAME: SC-DX100/ DX103/DX105

System	
Video signal	NTSC
Picture compression format	MPEG-2 (Disc), MPEG-4 (Card)
Image device	CCD (Charge-coupled device) 800K pixels
Lens	F1.6 34x (Optical), 1200x (Digital) Electronic zoom lens
Focal length	f2.3 ~ 78.2mm
Filter diameter	Ø30.5
LCD screen/Viewfinder	
Size/dot number	2.7inches wide 112k
LCD screen method	TFT LCD
Viewfinder	Color LCD
Connectors	
Composite output	1Vp-p (75 Ω terminated)
Audio output	-7.5dBs (600 Ω terminated)
USB output	Mini-B type connector
General	
Power source	DC 8.4V, Lithium-ion battery pack 7.4V
Power source type	Lithium Ion battery pack, Power supply (100V~240V) 50/60Hz
Power consumption (Recording)	5.35W (LCD/Viewfinder)
Operating temperature	0°~40°C (32°F~104°F)
Storage temperature	-20°C ~ 60°C (-4°F ~ 140°F)
External dimensions	Width 51.5 mm (2.03 inches), Height 87.5 mm (3.44 inches), Length 122 mm (4.80 inches)
Weight	439 g (0.92 lb, 14.71 oz) (Except for lithium-ion battery pack)
Internal MIC	Omni-directional stereo microphone
Remote control (SC-DX105 only)	Indoors: greater than 49 ft (15 m) (straight line), outdoors: about 16.4 ft (5 m) (straight line)

- These technical specifications and design may be changed without notice.

warranty (SEA users only)

SAMSUNG LIMITED WARRANTY

SAMSUNG Electronics America Inc. (SEA), warrants that this product is free from defective material and workmanship.

SEA further warrants that if product fails to operate properly within the specified warranty period and the failure is due to improper workmanship or defective material, SEA will repair or replace the product at it's option.

All warranty repairs must be performed by a SEA authorized service center. The name and address of the location nearest you can be obtained by calling toll free: 1-800 SAMSUNG (1-800-726-7864).

Labor

90 days carry-in

Parts

1 year

On carry-in models, transportation to and from the service center is the customer's responsibility.

The original dated sales receipt must be retained by the customer and is the only acceptable proof of purchase. It must be presented to the authorized service center.

EXCLUSIONS (WHAT IS NOT COVERED)

This warranty does not cover damage due to accident, fire, flood and/or other acts of God; misuse, incorrect line voltage, improper installation, improper or unauthorized repairs, commercial use, or damage that occurs in shipping. Exterior and interior finish, lamps, and glass are not covered under this warranty.

Customer adjustments which are explained in the instruction manual are not covered under the terms of this warranty.

This warranty will automatically be voided for any unit found with a missing or altered serial number. This warranty is valid only on products purchased in the United States and Puerto Rico.

Some States do not allow the exclusions or limitations of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.



If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center Samsung Electronics America, inc.

1-800-SAMSUNG (726-7864)

www.samsung.com



RoHS compliant

Our product complies with "The Restriction Of the use of certain Hazardous Substances in electrical and electronic equipment," and we do not use the 6 hazardous materials- Cadmium(Cd), Lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr +6), Poly Brominated Biphenyls (PBBs), Poly Brominated Diphenyl Ethers(PBDEs)- in our products.

Code No. AD68-02550A-00